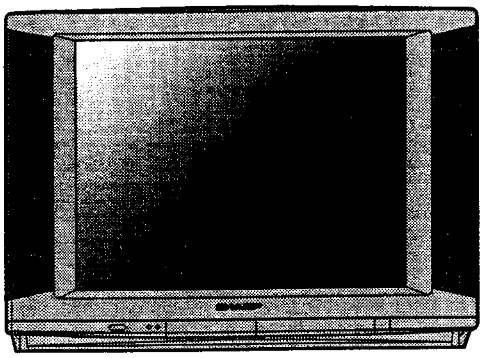
SHARP

SERVICE MANUAL
维修手册

S06T725KN1///



COLOUR TELEVISION
彩色电视机
Chassis No. SP-61

MODELS
型号
25KN1, 25KN1S
29KN1, 29KN1S

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

为了用户安全起见(根据一些国家的安全规程的需要)，应将电视机保持于最初的状态，而且只能使用与指定物相同的部件。

FEATURE

- One Chip Microprocessor Frequency Synthesizer System
  - 100 Channels Programming System
  - Channel Skip Preset System
  - Last (Channel / Volume / Power / User's Control / Fine Tuning) Memory System
- Full Auto Search Tuning System
- CATV (Hyper Band) Ready
- Wide Range Chopper Regulator System
- Fine Tuning Adjustable with Remote Control
- AV Input/Output Terminal (Front & Rear)
- Blue Back
- Direct Access Remote Control
- 21Systems World Wide Compatibility

主要功能

- 单片微电脑频率合成器系统
  - 100频道编程系统
  - 频道跳选设定系统
  - 最终(频道/音量/电源/用户控制/微调)记忆系统
- 全自动寻台调谐系统
- 有线闭路电路可并路状态
- 广城斩波调节器系统
- 可用遥控器控制的微调功能
- 声象信号输入/输出插孔(前后)
- 蓝色背景功能
- 遥控器直接存取功能
- 21制式全世界通用功能

WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis. To prevent electric shock, do not remove cover. No user — serviceable parts inside. Refer servicing to qualified service personnel.

警　告

该电视机底盘的有些部分通电。当维修本机底盘时，请在电源线插头和电源插座之间使用隔离变压器。
为了防止电击的危险，不要去拆下机盖。在里面的部件，不是使用者所能维修的，必须委托够格的维修人员来进行维修。

SHARP CORPORATION

CONTENTS

Page

- SPECIFICATIONS 3
- IMPORTANT SERVICE NOTES 4
- ADJUSTMENT PRECAUTIONS 5
- SERVICE ADJUSTMENT 10
- TROUBLE SHOOTING TABLE 17
- CHASSIS LAYOUT 23
- SOLID STATE DEVICE BASE DIAGRAM 24
- DESCRIPTION OF SCHEMATIC DIAGRAM 25

- SCHEMATIC DIAGRAM

  - REMOTE CONTROL UNIT 26
  - TUNER 27
- WAVEFORMES 29
  - MAIN UNIT 30

  - POWER AND CRT SOCKET UNIT

    25KN1 and 29KN1 33
    25KN1S and 29 KN1S 35

- BROCK DIAGRAM

  MAIN UNIT 37
  POWER AND CRT SOCKET UNIT 39

- REPLACEMENT PARTS LIST

  - ELECTRICAL PARTS 44
  - SUPPLIED ACCESSORIES 56
  - PACKING PARTS 56
  - CABINET PARTS 57

目 录

页数

- 规格 3
- 保养维修重要注意事项 4
- 调整注意事项 5
- 保养调整 10
- 故障检修表 17
- 机芯底盘电路布置 23
- 固体器件基座图 24
- 电路原理图的说明 25

- 电路原理图

  - 遥控器 26
  - 调谐器 27
- 波形图 29
  - 主电路装置 30

  - 电源、CRT管座电路装置

    型号25KN1和29KN1 33
    型号25KN1S和29KN1 35

- 电路方框图

  主电路装置 37
  电源、CRT管座电路装置 39

- 更换零件表

  - 电路零件 44
  - 附属品 56
  - 包装部件 56
  - 机壳零件 57

SPECIFICATIONS

Convergence	Self Converging System
Focus	Bi-potential, Uni-potential
Sweep Deflection	Magnetic
Intermediate Frequencies	
Picture IF Frequencies	38.9 MHz
Sound IF Carrier Frequency	
6.5 MHz	32.4 MHz
6.0 MHz	32.9 MHz
5.5 MHz	33.4 MHz
4.5 MHz	34.4 MHz
Color Sub-Carrier Ferquency	
PAL/NTSC	34.47 MHz
SECAM	34.494/34.65 MHz
NTSC	35.32 MHz
Power Input	110–240V AC 50/60Hz
Power Consumption	
25KN1, 25KN1S	160W
29KN1, 29KN1S	165W
Audio Power Output Rating	7.5W + 7.5W (at RMS 10% Dis.)
Speaker	
Size	12 x 6 cm (Elliptic) x 2pcs.
Voice Coil Impedance	8 ohms at 400Hz
Aerial Imput Impedence	
VHF/UHF	75ohm Unbalanced
Receiving Channels	
PAL-B/G, SECAM-B/G	
VHF	E2 thru E12
UHF	21 thru C57
CATV	S1 thru S53, M1 thru M10, S4 thru S41
PAL-D/K, SECAM-D/K	
VHF	R1 thru R12
UHF	21 thru C57
PAL-I	
VHF	(IRELAND): B thru J
UHF	(U.K, H.K): 21 thru C57
NTSC-M	
VHF	(US): 2 thru 13 (JAPAN): 1 thru 12
UHF	(US): 14 thru 79 (JAPAN): 13 thru 62
CATV	A-8 thru A-1, A thru W
Receiving Frequency	
VHF	48.25 MHz thru 463.25 MHz
UHF	471.25 MHz thru 863.25 MHz

Deminsions	25KN1, 25KN1S	29KN1, 29KN1S
Width	711.0 mm	789.0 mm
Height	520.0mm	580.0mm
Depth	495.0mm	507.4mm
Weight (approx.)	28.5 kg	38.0 kg
Cabinet Material		All Plastics

Specifications are subject to change without prior notice.

规 格

聚焦	自聚焦系统
焦点	双电位，单电位静电焦点
扫描偏转	磁致偏转
中频	
图象中频载波频率	38.9MHz
声音中频载波频率	
6.5MHz	32.4MHz
6.0MHz	32.9MHz
5.5MHz	33.4MHz
4.5MHz	34.4MHz
色彩副载波频率	
PAL/NTSC制式	34.47MHz
SECAM制式	34.494/34.65MHz
NTSC制式	35.32MHz
电源	交流110～240V、50/60Hz
功率消耗	
型号25KN1,25KN1S	160W
型号29KN1,29KN1S	165W
音响额定输出功率	7.5W+7.5W （均方根，10%偏差）
扬声器	
尺寸	12×6cm椭圆型×2只
音圈阻抗	8Ω(400Hz时)
天线输入阻抗	
甚高频(VHF)/超高频(UHF)	75Ω非平衡式
接收频道	
PAL-B/G、SECAM-B/G制式	
甚高频(VHF)	E2～E12频道
超高频(UHF)	21～C57频道
有线电视(CATV)	S1～S53频道 M1～M10频道 S4～S41频道
PAL-D/K、SECAM-D/K制式	
甚高频(VHF)	R1～R12频道
超高频(UHF)	21～C57频道
PAL-I制式	
甚高频(VHF)	（爱尔兰）：B～J频道
超高频(UHF)	（英国，香港）：21～C57频道
NTSC-M制式	
甚高频(VHF)	（美国）：2～13频道 （日本）：1～12频道
超高频(UHF)	（美国）：14～79频道 （日本）：13～62频道
有线电视(CATV)	A-8～A-1频道 A～W频道
接收频率	
甚高频(VHF)	48.25MHz～463.25MHz
超高频(UHF)	471.25MHz～863.25MHz

尺寸	型号25KN1,25KN1S	型号29KN1,29KN1S
宽	711.0mm	789.0mm
高	520.0mm	580.0mm
深	495.0mm	507.4mm
重量（大约）	28.5kg	38.0kg
机壳		均由塑料而成

上述规格变更之场合，恕不另行通知

IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be done by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10 k ohm Resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)

1. **Picture tube in this receiver employs integral implosion protection.**
2. **Replace with tube of the same type number for continued safety.**
3. **Do not lift picture tube by the neck.**
4. **Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.**

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:

1. 25KN1, 25KN1S: When reapiring the circuit, be sure not to increase the high voltage to more than 32.0 kV, (at beam 0µA) for the set.
   29KN1, 29KN1S: When reapiring the circuit, be sure not to increase the high voltage to more than 33.0 kV, (at beam 0µA) for the set.
2. 25KN1, 25KN1S: To keep the set in a normal operation, be sure to make it function on 29.0 kV ± 1.5 kV (at beam 1300µA) in the case of the set. The set has been factory – Adjusted to the above mentioned high voltage.
   29KN1, 29KN1S: To keep the set in a normal operation, be sure to make it function on 32.0 kV ± 1.5 kV (at beam 1400µA) in the case of the set. The set has been factory – Adjusted to the above mentioned high voltage.
3. Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety checks.

1. **Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.**
2. **Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators etc.**

保养维修重要注意事项

本电视机的保养只得由专门技术人员进行。

关于高压系统和显象管的保养维修

对高压系统进行保养维修时，先于显象管管座金属部分与第二阳极引线间用绝缘线（诸如测试探针等）串接一只10KΩ的电阻器，以除去残留于高压系统中的静电。（之前，应从电源插座中拔出本机的电源引线插头。）

1.本电视机显象管为整体内爆防护设计。

2.为保证本电视机持久使用的安全，显象管的更换必须使用同型号者　。

3.搬移显象管时，不得倒持其颈部上提。

4.拆装搬移显象管，必须先用布物等包护荧屏防碎玻璃，并且作完全放电处理后才能进行。

关于X射线

本电视机为无辐射射设计。因此，任何X射线均设计控制于最小绝对极限。然而，在发生故障或保养维修时，过长时间地暴露机芯内部加以放置之场合，便有可能在其近旁产生有害的X射线辐射影响。为此，务请遵循下述预防措施：

1.型号25KN1、25KN1S：维修调整本电视机内部电路时，切勿让其高压超过32.0kV(电子束电流为0μA时)。
  型号29KN1、29KN1S：维修调整本电视机内部电路时，切勿让其高压超过33.0kV(电子束电流为0μA时)。

2.型号25KN1、25KN1S：为保证本电视机的正常工作，务必保证其高压为29.0kV±1.5kV（电子束电流为1300μA时）的工作条件。该工作条件值在本电视机出厂前已经调试验收。
  型号29KN1、29KN1S：为保证本电视机的正常工作，务必保证其高压为32.0kV±1.5kV（电子束电流为1400μA时）的工作条件。该工作条件值在本电视机出厂前已经调试　验收。

3.更换显象管时，不得使用非经认可的不同厂家、不同型号的显象管，以免产生超过规定标准的X射线辐射的危险。

维修后归还之前

在把维修后的电视机归还给用户之前，务请进行下列的安全检查。

1.检查电视机中的所有导线的绝缘包皮有无扭折破损之处，于机芯底板和其它金属部件之间有无他物夹杂。

2.检查电视机中的所有非金属质的控制旋钮、绝缘鱼鳞纸，机壳后盖、调节器和仪器隔室盖罩或屏蔽，电阻一电容隔离网以及机械部件隔离器等保护绝缘装置、器材。

ADJUSTMENT PRECAUTIONS

SERVICE MODE

1) When the SERVICE IN (pin (37)) terminal gets to the "H" level 3 consecutive times, the service mode is called up. Getting to the "L" level 3 consecutive times, the service mode is cleared. (At the clearing of the service mode, the EEPROM contents are read once and an initialization is made.)
2) Once in the service mode, the EEPROM's initialization judgment bite is read 3 consecutive times before the IC gets initialized. If all the data are not identified all the 3 times, the EEPROM gets initialized.

Classification	Item	Data	Remarks
CUT OFF BKGD	CUT OFF (R)	60	
	CUT OFF (G)	60	
	CUT OFF (B)	60	
	DRIVER (R)	31	
	DRIVER (B)	31	
DEFLECTION ADJUSTMENT	TV H-CENTER (50Hz)	5	
	AV H-CENTER (50Hz)	5	
	TV H-CENTER (60Hz)	8	
	AV H-CENTER (60Hz)	8	
IF ADJUSTMENT	RF AGC	30	
	VCO	31	
SUB ADJUSTMENT	SUB CONT	80	
	SUB COLOUR	55	
	SUB SRIGHT	45	
	SUB TINT	58	
	SUB VOLUME	64/64 LEVELS	
	RF SUB VOLUME	80	
TRAP SELECTION	D-TRAP	SINGLE	
	F-TRAP	HIGH	
INITIAL SETTINGS	SPATIALIZER	ON	
	C-SYSTEM SECAM	SECAM AVAILABLE	
	S-SYSTEM M	M AVAILABLE	
	NICAM	AUTO	
OTHER ADJUSTMENT	TV DELAY TIME (PAL)	1	
	AV DELAY TIME (PAL)	1	
	TV DELAY TIME (SECAM)	5	
	AV DELAY TIME (SECAM)	5	
	TV DELAY TIME (NTSC)	1	
	AV DELAY TIME (NTSC)	1	
	TV DELAY TIME (B/W)	1	
	AV DELAY TIME (B/W)	1	
	AV TINT	0	
	AV SHARPNESS	3	
LAST DATA	LAST CHANNEL	CH 1	
	LAST VOLUME	MIN.	
	LAST CONTRAST	MAX.	
	LAST COLOUR, BRIGHTNESS, TINT & SHARPNESS	CENTER	
	LAST BASS, TREBLE & BALANCE	CENTER	
	LAST POWER	ON	
	LAST SPATIALIZER & BB	OFF	
	LAST SERVICE POSITION	SERVICE	
	LANGUAGE SELECTION	ENGLISH	
CHANNEL DATA	AFT	ALL CH ON	
	SKIP	ALL CH OFF	
	COLOUR, SOUND SYSTEM	ALL CH AUTO	
	MPX MODE	ALL CH STEREO, MAIN	

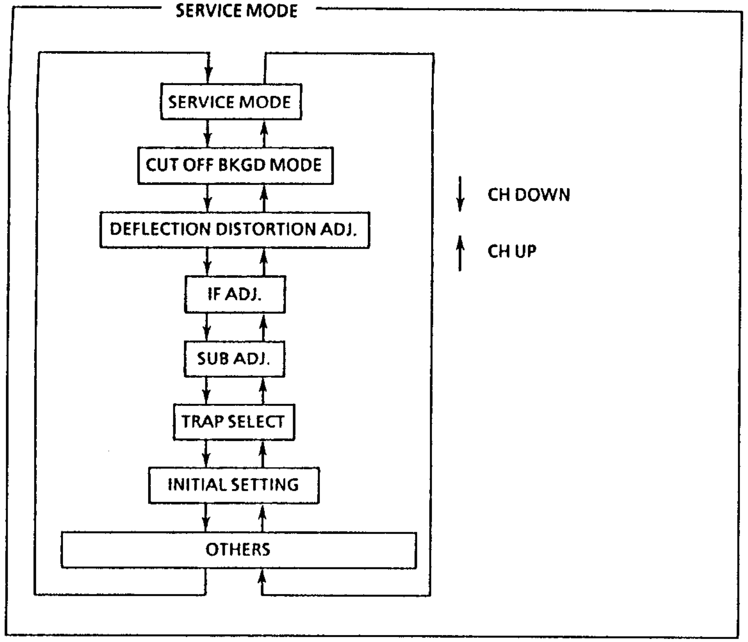
调整注意事项

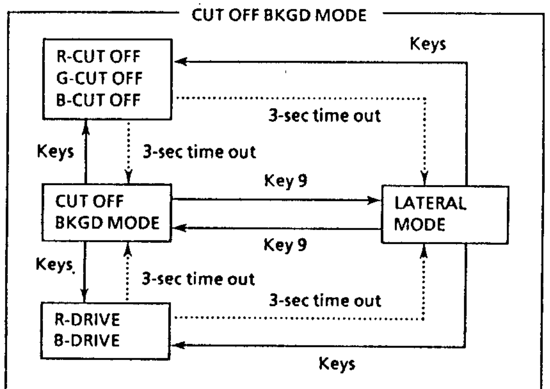
保养方式

1)保养输入(销(37))端连续3次达至高电平(H)时，本装置便被设为保养调整状态。相反，保养输入端连续3次达至低电平(L)时，所设定的保养调整状态即被取消。(取消保养调整状态时，EEPROM中内容被自动读进，使装置回至初始状态。)
2)进入保养调整状态后，EEPROM的初始状态判别字节连续读进三次，随后该集成块初始化。全部数据不是这样被连续识别三次之场合，EEPROM将回至初始状态。

类别	分项	数据	备注
截止背景	截止(红)	60	
	截止(绿)	60	
	截止(蓝)	60	
	激励(红)	31	
	激励(蓝)	31	
偏转调整	电视水平中心(50Hz)	5	
	声象水平中心(50Hz)	5	
	电视水平中心(60Hz)	8	
	声象水平中心(60Hz)	8	
中频调整	射频自动增益控制	30	
	压控振荡	31	
副调整	副对比度	80	
	副色彩	55	
	副亮度	45	
	副色调	58	
	副音量	64/64音级	
	射频副音量	80	
陷波调整	D陷波	单	
	F陷波	高	
初始设定	立体声装置	开	
	C制式SECAM	SECAM有效	
	S制式M	M有效	
	NICAM制式	自动	
其他调整	电视延迟时间(PAL制式)	1	
	声象延迟时间(PAL制式)	1	
	电视延迟时间(SECAM制式)	5	
	声象延迟时间(SECAM制式)	5	
	电视延迟时间(NTSC制式)	1	
	声象延迟时间(NTSC制式)	1	
	电视延迟时间(黑白)	1	
	声象延迟时间(黑白)	1	
	声象色调	0	
	声象清晰度	3	
关机前最后数据	最后设定频道	频道1	
	最后设定音量	最小	
	最后设定对比度	最大	
	最后设定色彩、亮度、色调和清晰度	中间	
	最后设定低音、高音和左右声道平衡	中间	
	最后设定电源	开	
	最后设定立体声和BB	关	
	最后设定保养调整位置	保养调整	
	最后选定语言	英语	
频道选定数据	自动微调	全频道开	
	自动跳频	全频道关	
	彩色制式和声音制式	全频道自动	
	MPX方式	全频道立体声、主声音	

3) In the service mode, the CH UP/DOWN key is used to select the modes in the following order.

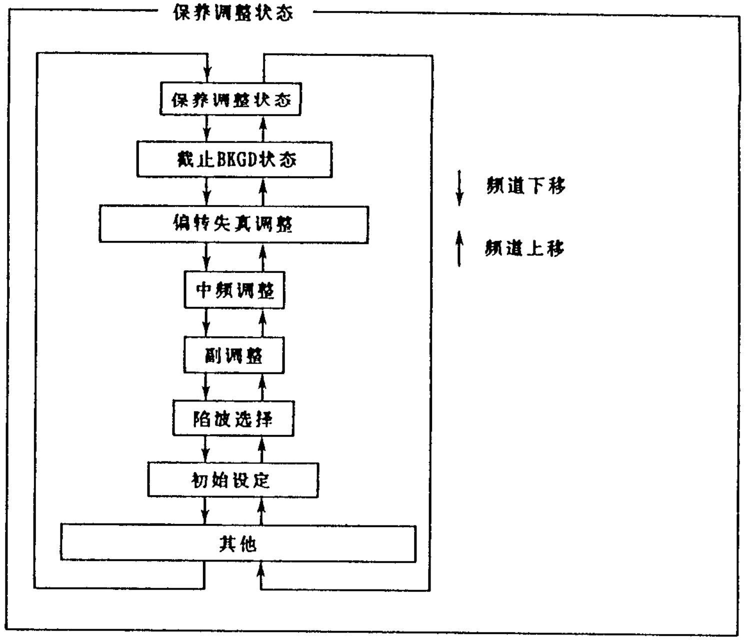

SERVICE MODE
SERVICE MODE
CUT OFF BKGD MODE
DEFLECTION DISTORTION ADJ.
IF ADJ.
SUB ADJ.
TRAP SELECT
INITIAL SETTING
OTHERS
CH DOWN
CH UP

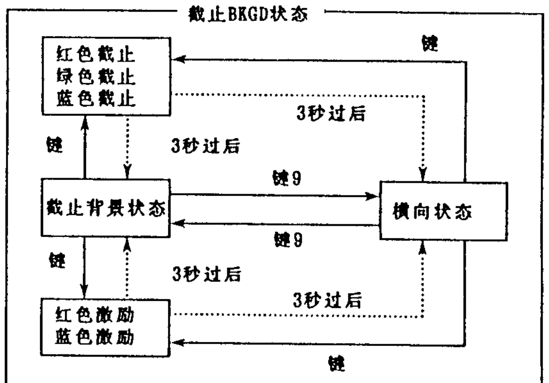

CUT OFF BKGD MODE
R-CUT OFF
G-CUT OFF
B-CUT OFF
Keys
3-sec time out
Keys
3-sec time out
Key 9
CUT OFF
BKGD MODE
LATERAL
MODE
Key 9
Keys
3-sec time out
3-sec time out
R-DRIVE
B-DRIVE
Keys

KEYS

	UP	DOWN
R-CUT OFF	Key 1	Key 4
G-CUT OFF	Key 2	Key 5
B-CUT OFF	Key 3	Key 6
R-DRIVE	Key 7	Key F/B
B-DRIVE	Key 8	Key 0

3)保养调整状态下，频道上移/下移键将按下示顺序进行设定。

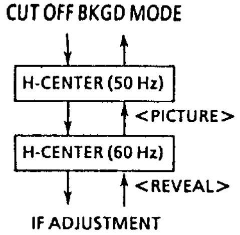

保养调整状态
保养调整状态
截止BKGD状态
偏转失真调整
中频调整
副调整
陷波选择
初始设定
其他
频道下移
频道上移


截止BKGD状态
红色截止
绿色截止
蓝色截止
键
3秒过后
键
3秒过后
键9
截止背景状态
横向状态
键9
键
3秒过后
3秒过后
红色激励
蓝色激励
键

调整用键

	上移	下移
红色截止	键1	键4
绿色截止	键2	键5
蓝色截止	键3	键6
红色激励	键7	键F/B
蓝色激励	键8	键0

DEFLECTION DISTORTION ADJUSTMENT


CUT OFF BKGD MODE
H-CENTER (50 Hz)
<PICTURE>
H-CENTER (60 Hz)
<REVEAL>
IF ADJUSTMENT

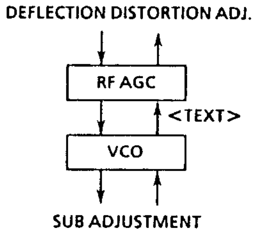
↓ CH DOWN

↑ CH UP

DATA UP : VOLUME UP
DATA DOWN : VOLUME DOWN
< > denotes the direct keys.

H-CENTER:
Determining the M52340's horizontal center setting. Storing the setting, each for 50 Hz and 60 Hz, in memory. Also storing in memory the setting for each frequency according to the TV or AV mode.

IF ADJUSTMENT


DEFLECTION DISTORTION ADJ.
RF AGC
<TEXT>
VCO
SUB ADJUSTMENT

↓ CH DOWN

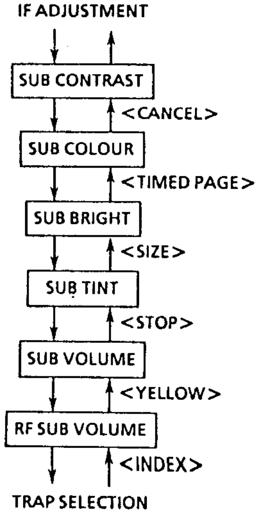
↑ CH UP

DATA UP : VOLUME UP
DATA DOWN : VOLUME DOWN
< > denotes the direct keys.

RF AGC:
Determining the M52340's delay setting.

VCO:
Determining the M52340's VCO setting.

SUB ADJUSTMENT


IF ADJUSTMENT
SUB CONTRAST
<CANCEL>
SUB COLOUR
<TIMED PAGE>
SUB BRIGHT
<SIZE>
SUB TINT
<STOP>
SUB VOLUME
<YELLOW>
RF SUB VOLUME
<INDEX>
TRAP SELECTION

↓ CH DOWN

↑ CH UP

DATA UP : VOLUME UP
DATA DOWN : VOLUME DOWN
< > denotes the direct keys.

SUB CONTRAST:
Determining the M52340's maximum contrast setting.

SUB COLOUR:
Determining the M52340's colour center setting.

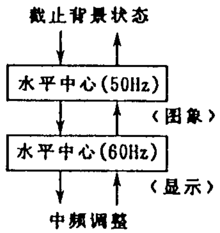
SUB BRIGHTNESS:
Determining the M52340's brightness center setting.

SUB TINT:
Determining the M52340's tint center setting. Turning on the Y mute.

SUB VOLUME:
Determining the M62420's maximum volume setting. Setting the volume level to maximum.

RF SUB VOLUME:
Determining the M52340's audio attenuation level. Setting the volume level to maximum.

偏转失真调整


截止背景状态
水平中心(50Hz)
（图象）
水平中心(60Hz)
（显示）
中频调整

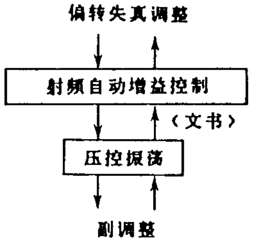
↓ 频道下移

↑ 频道上移

数据上调：音量上调
数据下调：音量下调
（ ）意为直接触键

水平中心：
选定M52340水平中心的设定数据，并将这些数值分50Hz和60Hz存于记忆装置。然后，再按所有电视和声象装置的制式分各频率存于记忆装置。

中频调整


偏转失真调整
射频自动增益控制
（文书）
压控振荡
副调整

↓ 频道下移

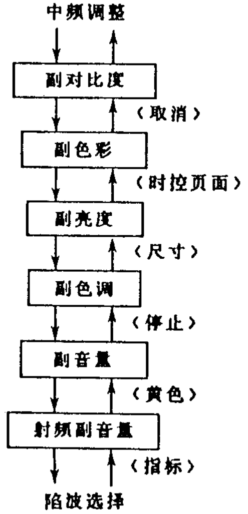
↑ 频道上移

数据上调：音量上调
数据下调：音量下调
（ ）意为直接触键。

射频自动增益控制：
选定M52340延迟的设定数据。

压控振荡：
选定M52340压控振荡的设定数据。

副调整


中频调整
副对比度
（取消）
副色彩
（时控页面）
副亮度
（尺寸）
副色调
（停止）
副音量
（黄色）
射频副音量
（指标）
陷波选择

↓ 频道下移

↑ 频道上移

数据上调：音量上调
数据下调：音量下调
（ ）意为直接触键。

副对比度：
选定M52340最大对比度的设定数据。

副色彩：
选定M52340中间色彩的设定数据。

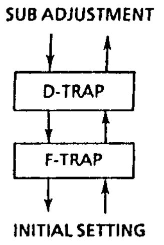
副亮度：
选定M52340中间亮度的设定数据。

副色调：
选定M52340中间色调的设定数据。再打开Y消音。

副音量：
选定M62420最大音量的设定数据，将音量调至最大。

射频副音量：
选定M52340音频衰减电平，将音量调至最大。

TRAP SELECTION


SUB ADJUSTMENT
D-TRAP
F-TRAP
INITIAL SETTING

↓ CH DOWN

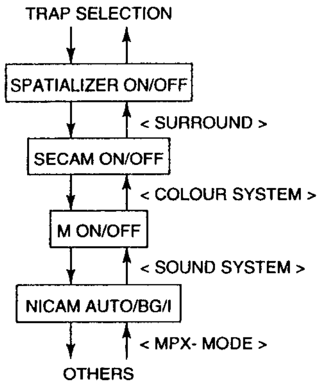
↑ CH UP

DATA UP : VOLUME UP
DATA DOWN : VOLUME DOWN

D-TRAP:
Determining the M52340's double trap for double or single.

F-TRAP:
Determining the M25340's trap fine for low or high.

INITIAL SETTING


TRAP SELECTION
SPATIALIZER ON/OFF
< SURROUND >
SECAM ON/OFF
< COLOUR SYSTEM >
M ON/OFF
< SOUND SYSTEM >
NICAM AUTO/BG/I
< MPX- MODE >
OTHERS

↓ CH DOWN

↑ CH UP

DATA UP : VOLUME UP
DATA DOWN: VOLUME DOWN
< > denotes the direct keys

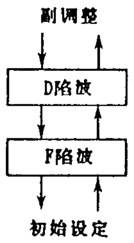
SPATIALIZER ON/OFF:
Determining whether to switch for the spatializer or not.

SECAM ON/OFF:
Determining whether to accept the forced SECAM colour system or not.

M ON/OFF:
Determining whether to accept the forced M sound system or not.

NICAM AUTO/BG/I:
Determining for AUTO, BG or I of the NICAM system.

陷波选择


副调整
D陷波
F陷波
初始设定

↓ 频道下移

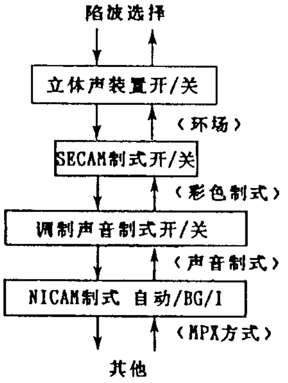
↑ 频道上移

数据上调：音量上调
数据下调：音量下调

D陷波：
选定M52340的双陷波，以决定单双。

F陷波：
选定M52340的微陷波，以决定高低。

初始设定


陷波选择
立体声装置开/关
（环场）
SECAM制式开/关
（彩色制式）
调制声音制式开/关
（声音制式）
NICAM制式 自动/BG/I
（MPX方式）
其他

↓ 频道下移

↑ 频道上移

数据上调：音量上调
数据下调：音量下调
（ ）意为直接触键。

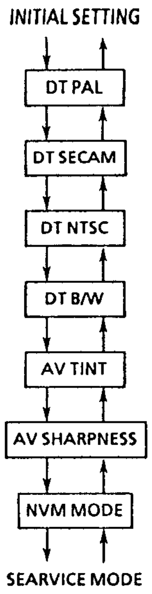
立体声装置开/关：
决定是否打开立体声装置开关。

SECAM制式开/关：
决定是否接收强制SECAM彩色制式。

调制声音制式开/关：
决定是否接收强制调制声音制式。

NICAM制式 自动/BG/I：
决定NICAM制式的自动、BG或I的方式。

OTHERS


INITIAL SETTING
DT PAL
DT SECAM
DT NTSC
DT B/W
AV TINT
AV SHARPNESS
NVM MODE
SEARVICE MODE

↓ CH DOWN

↑ CH UP

DATA UP : VOLUME UP
DATA DOWN : VOLUME DOWN

DT PAL:
Determining the M52340's delay time and delay fine level for the PAL system.

DT	DL	time	DL fine
0	0	0	0
1	0	0	1
2	0	1	0
3	0	1	1
4	1	0	0
5	1	0	1
6	1	1	0
7	1	1	1

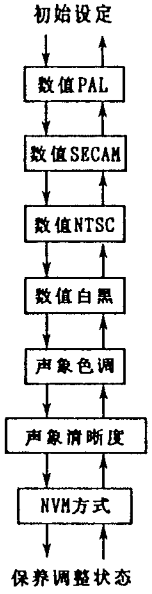
DT SECAM/NTSC/BW:
Determining the M52340's delay time and delay fine level for other colour systems than the PAL one. See the above table.

AV TINT:
Determining the AV mode tint to be added to the TV mode tint.

AV SHARPNESS:
Determining the AV mode sharpness to be added to the TV mode sharpness.

NVM MODE:
Used to check and modify the EEPROM data. Sub address with the P-MODE and P-NORM keys. Page up/down with the UP/DOWN and TIMER keys.

其他


初始设定
数值PAL
数值SECAM
数值NTSC
数值白黑
声象色调
声象清晰度
NVM方式
保养调整状态

↓ 频道下移

↑ 频道上移

数据上调：音量上调
数据下调：音量下调

数值PAL：
选定M52340PAL制式的延迟时间和延迟微电平。

数值	延迟	时间	延迟微电平
0	0	0	0
1	0	0	1
2	0	1	0
3	0	1	1
4	1	0	0
5	1	0	1
6	1	1	0
7	1	1	1

数值SECAM、NTSC和黑白：
选定M52340除PAL制式外的其他制式的延迟时间和延迟微电平。

声象色调：
在电视接收色调上选定声象输入的色调。

声象清晰度：
在电视接收清晰度上选择声象输入的清晰度。

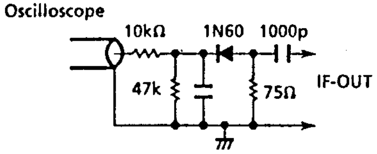
NVM方式：
用于检查和修正EEPROM的数据。用图象方式键和标准图象键调副地址。用上调/下调键和计时器键调页面上下。

SERVICE ADJUSTMENT

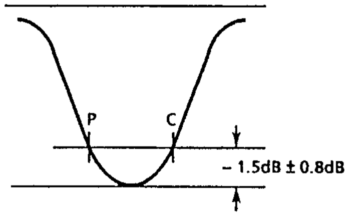
PIF/AFT/AGC ADJUSTMENT

TUNER IFT (Preset)

1. Receive the E-12CH (VHF-H band) signal. Disconnect the antenna to get the tuner without any signal input.
2. Connect the sweep generator's output cable to the tuner antenna.
3. Adjust the sweep generator's output level to 80 dBμV.
4. Connect the response lead (use a low-impedance probe with wave detector.) to the tuner's IF output terminal. (This terminal must have the probe alone connected.)



5. Set the RF AGC voltage to 0-6 V with no contact with the waveform.
6. Adjust the tuner IF coil to obtain the wave form as shown in figure below.

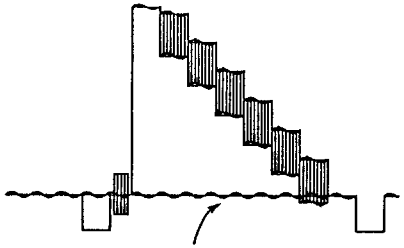


Note:
Be sure to keep the tuner cover in position during this adjustment.

COIL ADJUSTMENT: T201 (VCO)

1. Receive the E-12CH (VHF-H band, PAL colour bar) signal. If this signal is not available, receive an E-5CH or higher-channel signal.
   - Field strength: 55-80 dBμV
2. Connect the oscilloscope to pin (36) of IC801.
   - Range: 0.5 V/div.
   - Sweep time: 20 μsec/div.
   - Sync: Horizontal sync
3. Connect the standard signal generator's output cable to the tuner's IF output terminal with a 1-pF capacitor in between.
   - Frequency: 38.9 MHz (CW) ± 5 kHz
   - Level: About 90 dBμV
4. Using the Preset key, bring about the MANUAL (VHF-H) mode. Adjust the Fine Tuning Up/Down keys so that the waveform be free of beating.
5. Using the Preset key, bring about the NORMAL mode.
6. Adsjust T202 so that the waveform be free of beating.
   - Adjustment error: 38.9 MHz ± 25 kHz

Note:
Make this adjustment with the VCO bus data in the service mode at 31/63.



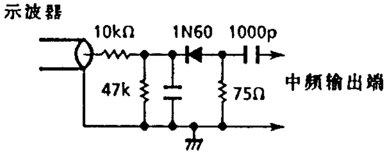
Note:
Warm up the unit long enough before starting adjustment and checking.

保养调整

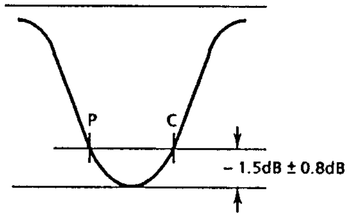
PIF/AFT/AGC的调试

调谐器中频变压器线圈的调试（预设）

1. 接收E-12频道(高域甚高频VHF)信号后，拔出天线接线端，设频道于无信号接收状态。
2. 接扫频振荡器输出端于调谐器天线接线端。
3. 扫频振荡器输出电平：80dBμV。
4. 接响应引线（使用带有检波器的低阻抗探针）于调谐器中频输出端。（只接探针于调谐器中频输出端）。



5. 设射频自动增益控制RF AGC于0至6V，消去其波形表示。
6. 再将调谐器中频线圈所得波形调至下图所示的规定要求。

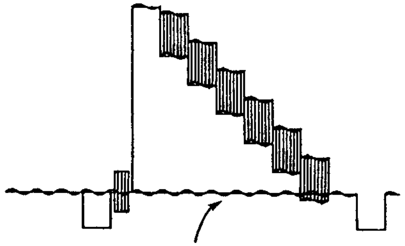


注意：
调整时，请确认调谐器盒盖的罩接。

线圈的调试：T201（压控振荡器VCO）

1. 接收E-12频道(高域甚高频的PAL制式彩条)信号。无E-12频道信号输入时，可用E-5频道以上的频道信号代替。
   - 场强度：55～80dBμV
2. 接示波器于IC801的销(36)。
   - 测示范围：　0.5V/段
   - 扫描时间：　20微秒/段
   - 同步动作：　水平同步
3. 通过串接一只1pF的电容器，接标准信号发生器的输出端于调谐器中频输出端。
   - 频率：　38.9MHz(CW)±5kHz
   - 电平：　约90dBμV
4. 触按预设键置电视机于“MANUAL VHF-H”(高域甚高频)状态。上下调节调谐器的微调控制，使其输出波形呈现零拍。
5. 再触按预设键处电视机于标准状态。
6. 调节T202，使其输出波形的差拍消失为零。
   - 调整误差：　38.900MHz±25kHz

注意：作此项调试之前，必须确认在服务状态下的“压控振荡器VCO”的总线控制数据为31/63。



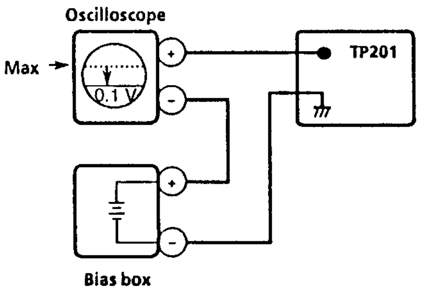
注意：
作此项调试之前，应先充分预热之。

PIF/AFT/AGC ADJUSTMENT (Continued)

RF AGC CUT-IN ADJUSTMENT: I^{2}C bus adjustment in service mode

1. Receive the E-12CH (PAL colour bar) signal.
   - Field strenght: 57 ± 1 dBμV (50 ohms open)
2. Connect the oscilloscope to TP201 (tuner's AGC terminal), as shown in figure below.
3. Adjust the RF AGC bus data so that the voltage be maximum.
4. Adsjust the RF AGC bus data to make the voltage drop down 0.1 V from maximum

5. Adjust the signal level to 63-67 dBμV and make sure there is no noise.
6. Now adjust the signal level to 90-95 dBμV and make sure there is no chrominance modulation beat.



Bias box: About 6.0 V

SOUND ADJUSTMENT

RF sub-volume: I^{2}C bus adjustment in service mode

1. Receive the PAL colour bar signal.
   - Audio signal: 400 Hz, 100% modulated (50 kHz dev.)
2. Connect the oscilloscope to the Audio Out (L or R) terminal. (Terminate with a 10k ohm impedance.)
3. Adjust the RF SUB VOL data so that the 400-Hz sine wave be 1.76 Vp-p.
   - Adjustment error: 1.76 +0.04/-0.06 Vp-p

Noise mute checking

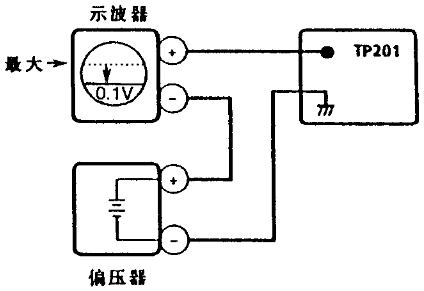
1. Receive the 400 Hz, 100% modulated signal.
2. Turn up the volume control to maximum and make sure the sound is heard from the speakers. Then put the unit in the no-signal state.
3. Be sure that the sound mute is effective.
4. Finally turn down the volume control to minimum.

PIF／AFT／AGC的调试 （接上页）

射频自动增益控制插入调试：在服务状态下进行I^{2}C总线的调试

1. 接收PAL制式彩条信号。
   - ●场强度：57±1dBμV （端接50Ω电阻）
2. 按下图所示要求接示波器于TP201(调谐器自动增益控制接线端)。
3. 调节“射频自动增益控制”的总线控制数据，使所测电压读数达至最大。
4. 调节“射频自动增益控制”的总线控制数据，将电压读数调至最大值0.1V之程度。

5. 调信号强度为63～67dBμV，确认无噪声出现。
6. 再调信号强度为90～95dBμV，确认无色度信号调制差拍出现。



偏压器电压：约6.0V

声音制式的调试

射频副声音的调试：在服务状态下进行I^{2}C总线的调试

1. 接收PAL制式彩条信号。
   - ●音频信号成分：400Hz，100调制(50kHz偏转)
2. 接示波器于音频输出端（左或右）。（端接10kΩ电阻）
3. 调节射频副声音数据，使400Hz正弦波幅值达至1.76Vp-p的规定要求。
   - ●调整误差：1.76+0.04Vp-p
     1.76-0.06Vp-p

消音功能的检查

1. 接收400Hz，100%调制信号。
2. 设音量控制于最大位置，检查扬声器的声音输出，然后，设电视机于无信号接收状态。
3. 此时，检查消音功能是否工作。
4. 最后，设音量控制于最小位置。

PURITY ADJUSTMENT

1. Keep the static convergence roughly adjusted.
2. Maintain the purity magnet at the zero magnetic field.

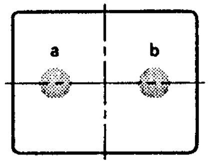
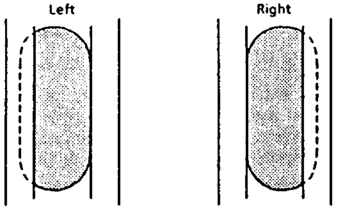
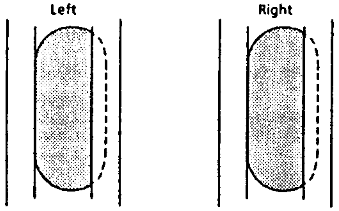


Fig. A



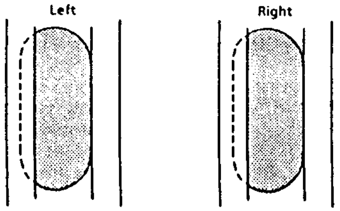
Equally placed outward

Fig. B



Displaced to the right

Fig. C



Displaced to the left

Fig. D

1. Warm up the unit for 30 minutes or longer with a beam current of over 1000µA (25KN1, 25KN1S), 1100µA (29KN1, 29K1S).
2. Receive the green-only signal. Adjust the beam current to 1000µA (25KN1, 25KN1S), 1100µA (29KN1, 29K1S) or so.
3. Degauss the CRT enough with the degaussing coil.

PREPARATIONS

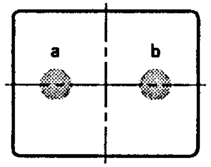
- Orientation: Eastward
  Adjustment field

Destination	Bv	Bh
China	30,000 nT (0.30G)	20,000 nT (0.20G)
CIS	45,000 nT (0.45G)	20,000 nT (0.20G)
Hong Kong	30,000 nT (0.30G)	20,000 nT (0.20G)
Singapore	–10,000 nT (–0.10G)	40,000 nT (0.40G)
Middle and Near East	30,000 nT (0.30G)	20,000 nT (0.20G)
Africa	–10,000 nT (–0.10G)	40,000 nT (0.40G)

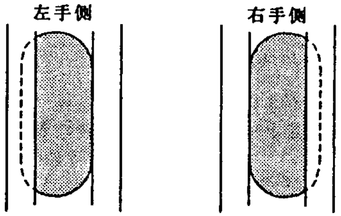
1. Observe the points "a" and "b", as shown in Fig. A, through a microscope. Adjust the landings to the specified requirements.
2. Move the deflection yokes forward so that the left and right landings be equally placed outward. See Fig. B.
3. If the landings are placed to the left or right, as shown in Figs. C and D, readjust the open angle of the purity magnet.
4. Make sure the left and right beam landings are as specified. Now check the CRT corners to see if they all meet the rank "B" requirements.
5. If any other colour appears on the screen, move the deflection coil backward.
   - Landings outward: Deflection yokes forward
   - Landings inward: Deflection yokes backward
6. Orient the raster rotation to 0 eastward.
7. Tighten up the deflection coil screws.
   - Tightening torque: 11 ±2 kg-cm

色彩纯度的调试

1. 必须先对静聚焦度进行粗调。
2. 调节色彩纯度磁铁，使其磁场磁势为0。

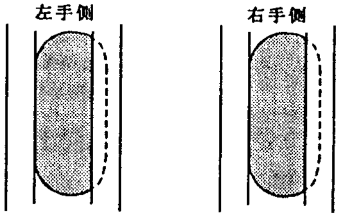


图A



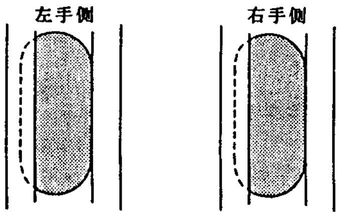
电子束射击点位置向外偏移

图B



电子束射击点位置向右偏移

图C



电子束射击点位置向左偏移

图D

1. 作此项调试之前，先用大于1000µA (25KN1, 25KN1S), 1100µA (29KN1, 29K1S) 的电子束电流预热阴极显象管CRT30分钟以上。
2. 接收绿色单色信号，并调节其电子束电流于1000µA (25KN1, 25KN1S), 1100µA (29KN1, 29K1S) 左右。
3. 通过消磁线圈对阴极显象管CRT作完全消磁处理。

调试

- 调试中，必须保持CRT面朝东方。
  调整磁场磁势

发往地	Bv	Bh
中国	30,000 nT (0.30G)	20,000 nT (0.20G)
CIS	45,000 nT (0.45G)	20,000 nT (0.20G)
俄罗斯	30,000 nT (0.30G)	20,000 nT (0.20G)
新加坡	–10,000 nT (–0.10G)	40,000 nT (0.40G)
中东	30,000 nT (0.30G)	20,000 nT (0.20G)
非洲	–10,000 nT (–0.10G)	40,000 nT (0.40G)

1. 用放大显示镜观察图A所示两色点(a点和b点)，调节色彩纯度磁铁，使两色点位置符合规定要求。
2. 如果两色点位置如图B所示各自发生左右偏移，可向前按压偏转线圈将其调整。
3. 如果两色点位置如图C或图D所示均发生向右或向左偏移，可通过调节色彩纯度磁铁的开启程度，调整电子束射击点位置。
4. 设定荧屏中心部位左右两边的电子束射击点位置于正确的射击点位置。然后，检查荧屏四角的射击点位置正确与否。最后，按规范B级要求检查荧屏上任意点的着色位置是否满足规定要求。
5. 如果着色点掺杂有其它色彩，可向后拉偏转线圈消除其它杂色。
   - 着色点位置向外偏移：前推偏转线圈加以调节。
   - 着色点位置向内偏移：后拉偏转线圈加以调节。
6. 将光栅偏转角调节至0，并保持阴极显象管CRT面朝东方。
7. 紧固偏转线圈的螺丝。
   - 紧固扭矩：11kg ± 2kg-cm

CONVERGENCE ADJUSTMENT

CONVERGENCE ADJUSTMENT (To be done after the purity adjustment)

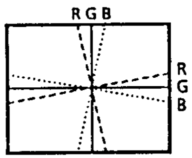


Fig. a

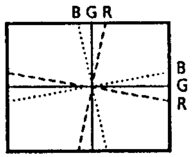


Fig. b

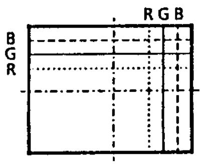


Fig. c

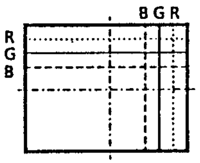
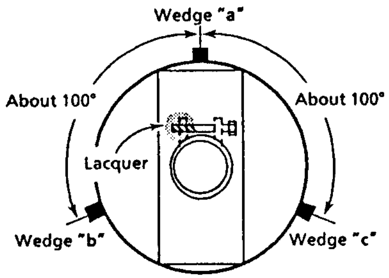
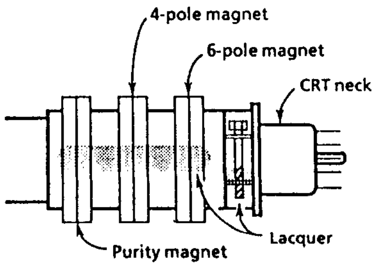


Fig. d


Wedge "a"
About 100°
About 100°
Lacquer
Wedge "b"
Wedge "c"


4-pole magnet
6-pole magnet
CRT neck
Lacquer
Purity magnet

1. Receive the crosshatch pattern signal.
2. Make the brightness and contrast settings at 32/64 (Normal) and 64/64 (Maximum), respectively.

STATIC CONVERGENCE

1. Turn the 4-pole magnet to a proper open angle in order to superpose the blue and red colours.
2. Turn the 6-pole magnet to a proper open angle in order to superpose the green over the blue and red colours.

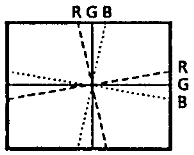
DYNAMIC CONVERGENCE

1. Adjust the convergence on the fringes of the screen in the following steps.
   - a) Fig. a: Drive the wedge at point "a" and swing the deflection coil upward.
   - b) Fig. b: Drive the wedges at points "b" and "c" and swing the deflection coil downward.
   - c) Fig. c: Drive the "c" wedge deeper and swing the deflection coil rightward.
   - d) Fig. d: Drive the "b" wedge deeper and swing the deflection coil leftward.
2. Fix all the wedges on the CRT and apply glass tape over them.
3. Apply lacquer to the deflection yoke lock screw, magnet unit (purity, 4-pole and 6-pole magnets) and magnet unit lock screw.

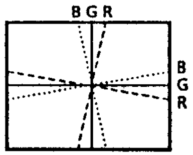
Finally receive the red-only and blue-only signals to make sure there is no other colours on the screen.

画面聚焦度的调试

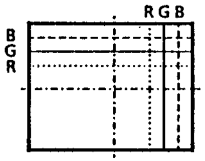
画面聚焦度的调试（此项调试必须于色彩纯度磁铁调试完毕后进行）。



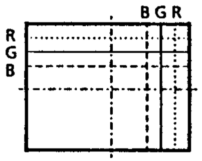
图a



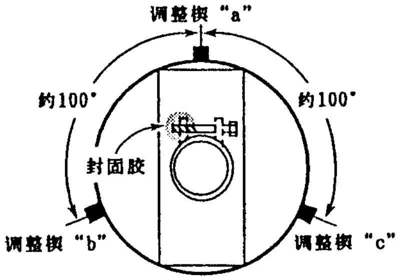
图b

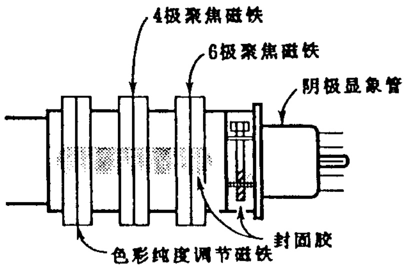


图c



图d


调整楔 "a"
约100°
约100°
封固胶
调整楔 "b"
调整楔 "c"


4极聚焦磁铁
6极聚焦磁铁
阴极显象管
封固胶
色彩纯度调节磁铁

1. 接收棋盘格测试图案信号。
2. 设亮度控制于标准位置(32/64)。
   设对比度控制于最大位置(64/64)。

静聚焦度的调试

1. 调节4极聚焦磁铁的开角与转角，使蓝色线条与红色线条重叠。
2. 调节6极聚焦磁铁的开角与转角，使绿色线条再与蓝、红色重叠线条重叠。

动聚焦度的调试

1. 按下述要求调节荧屏周边的聚焦度。
   - a）图a：插调整楔于 "a"，向上摆动偏转线圈进行调节。
   - b）图b：插调整楔于 "b" 和 "c"，向下摆动偏转线圈进行调节。
   - c）图c：深插调整楔 "c"，向右摆动偏转线圈加以调节。
   - d）图d：深插调整楔 "d"，向左摆动偏转线圈加以调节。
2. 贴三支调整楔于阴极显象管CRT上，用玻璃胶带固定之。
3. 加封固胶于偏转线圈的固定螺丝、磁铁装置（色彩纯度调节磁铁、4极与6极聚焦磁铁）以及磁铁装置的固定螺丝，封固之。

该项调试完毕后，再让电视机接收红色信号或蓝色信号，然后，检查接收的单色信号是否掺杂有其它色彩信号。

CUT-OFF, BACKGROUND AND SUB-CONTRAST ADJUSTMENTS

CRT CUT-OFF ADJUSTMENT

Service mode: I²C bus adjustment (R-CUT OFF, G-CUT OFF, B-CUT OFF, SUB BRI)

Screen control

1. Receive the monoscope pattern signal.
2. With the remote controller, set to the P-NORMAL mode.
3. Select the CUT OFF BKGD mode in the service mode.
4. Make the following settings.
   Screen control: 0/10
5. Press the "9" key on the remote controller to reach the horizontal centering mode.
6. Turn the screen control clockwise until the horizontal raster of the first glimmering colour becomes slightly visible.
7. Adjust the cut-off data of the other two colours until the horizontal raster becomes whitish. (Note 1)
8. Turn the screen control counterclockwise until the horizontal raster disappears.
9. Press the "9" key on the remote controller to call the Normal mode.

Note 1:

Before starting this adjustment, warm up the unit for 30 minutes or longer at a bram current of over 1100µA (25KN1, 25KN1S), 1200µA (29KN1, 29KN1S).

- R CUT OFF UP "1" KEY
- R CUT OFF DOWN "4" KEY
- G CUT OFF UP "2" KEY
- G CUT OFF DOWN "5" KEY
- B CUT OFF UP "3" KEY
- B CUT OFF DOWN "6" KEY

The data can be turned up and down with the above keys.

WHITE BALANCE ADJUSTMENT

Service mode: I²C bus adjustment (R-DRIVE, B-DRIVE)

1. Receive the monoscope pattern signal.
2. Make this adjustment after the CRT cut-off adjustment.
3. Connect the beam current meter between TP601 (−) and TP602 (+). (Full scale: 3-mA range)
4. Adjust the "SUB CONT" data so that the beam current be 1300µA (25kn1, 25kn1s), 1400µA (29KN1, 29KN1S).
5. Adjust the "R-DRIVE" and "B-DRIVE" data to have a colour temperature of 12300°K (white).
6. Adjust the contrast and brightness controls so that the beam current be about 200 µA, and check the background colour. (See Note 2.)
7. Now check the colour temperature. If it is not 12300°K, go back to Step 1 and do the same over again.

Note:

Before this adjustment, warm up the unit for over 30 minutes with a beam current of over 1100µA (25KN1, 25KN1S), 1200µA (29KN1, 29KN1S).

- 12300°K: x: 0.272 (x: 0.300 CIS only)
  y: 0.275 (y: 0.310 CIS only)
  (with the CA-100 Minolta colour thermometer)

Note 2:

- R-DRIVE UP "7" KEY
- R-DRIVE DOWN "F/B" KEY
- B-DRIVE UP "8" KEY
- B-DRIVE DOWN "0" KEY

SUB-CONTRAST ADJUSTMENT

Service mode: I²C bus adjustment (SUB CONT)

1. Make this adjustment just after the white balance adjustment.
2. Receive the monoscope pattern signal.
3. Connect the beam current meter between TP601 (−) and TP602 (+).
   - Meter's full-scale: 3 mA range
4. Adjust the SUB CONT bus data so that the beam current be 1300µA (25kn1, 25kn1s), 1400µA (29KN1, 29KN1S).

Note:

Before starting this adjustment, warm up the unit for 30 minutes or longer at a beam current of over 1300µA (25KN1, 25KN1S), 1400µA (29KN1, 29KN1S).

截止、背景以及副对比度的调整

CRT截止的调整

保养调整状态：I²C总线调整(红色截止、绿色截止、蓝色截止以及副亮度)

荧屏控制

1. 接收单象管图案信号。
2. 用遥控器设定标准图象状态。
3. 于保养调整状态下选定截止背景方式。
4. 按下记要求作设定：
5. 触按遥控器上的数字键"9"，设定水平中心方式。
6. 顺时针旋转荧屏控制旋钮，使首道彩色的水平光栅达至依稀可见之程度。
7. 调节其他两种彩色的截止数据，使这两种彩色的光栅泛白。（请见注1）
8. 逆时针方向旋转荧屏控制旋钮，使水平光栅完全消失。
9. 触按遥控器上的数字键"9"，设定出标准图象方式。

注1:

在进行此项调整前，应先预热该装置30分钟以上，以让电子束电流超过1100µA (25KN1, 25KN1S), 1200µA (29KN1, 29KN1S).

- 红色截止上调用"1键"
- 红色截止下调用"4键"
- 绿色截止上调用"2键"
- 绿色截止下调用"5键"
- 蓝色截止上调用"3键"
- 蓝色截止下调用"6键"

用上述数字键上调或下调截止数据。

白色平衡的调整

保养调整状态：I²C总线调整（红色激励，蓝色激励）

1. 接收单象管图案信号。
2. 先做完CRT截止调整后再进行此项调整。
3. 接电子束电流计于TP601（—）和TP602（+）之间。（最大测幅：3mA）
4. 调节副对比度的数据，使电子束电流达至1300µA (25KN1, 25KN1S), 1400µA (29KN1, 29KN1S).
5. 调节红色激励和蓝色激励，使其色温达至12300° K（白色）。
6. 调节对比度和亮度控制，使电子束电流达至200μA左右，同时检查背景色彩。(见注2)
7. 再检查色温，如色温不为12300° K，则需回至步骤1重新调整。

注意：

在进行此项调整前，应先预热该装置30分钟以上，以让电子束电流超过1100µA (25KN1, 25KN1S), 1200µA (29KN1, 29KN1S).

- 12300° X：0.272 (x: 0.300 CIS)
  Y：0.275 (y: 0.310 CIS)
  （用美能达CA-100色温计测量）

注2：

- 红色激励上调用"7键"
- 红色激励下调用"F/B键"
- 蓝色激励上调用"8键"
- 蓝色激励下调用"0键"

副对比度控制的调试

在服务状态下进行I²C总线的调试（副对比度）

1. 该项调试应在白色平衡的调试完毕后进行。
2. 接收E-5频道(单象管图案）信号。
3. 接电子束安培计于TP601(-)与TP602(+)之间。
   - 安培计测示范围：3mA
4. 调节副对比度的数据，使电子束电流达至1300µA (25KN1, 25KN1S), 1400µA (29KN1, 29KN1S).

注意：

在进行此项调整前，应先预热该装置30分钟以上，以让电子束电流超过1100µA (25KN1, 25KN1S), 1200µA (29KN1, 29KN1S).

CUT-OFF, BACKGROUND AND SUB-CONTRAST ADJUSTMENTS (Continued)

SUB-BRIGHTNESS ADJUSTMENT

Service mode: I^2C bus adjustment (SUB BRI)

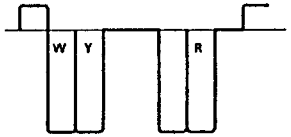
1. Receive the crosshatch pattern signal.
2. Adjust the "SUB-BRIGHT" data so that the fourth (1 thru 5 from left) portion of the window pattern should become blackish.

PAL CHROMA ADJUSTMENTS

SUB-COLOUR

Service mode: I^2C bus adjustment (SUB COL)

1. Receive the PAL colour bar signal.
2. Connect the oscilloscope to TP852 (RED cathode).
   (Use a 10:1 probe.)
   - Range: 2 V/div.
   - Sweep time: 20 μsec/div.
3. Call the SUB COL mode in the service mode. Adjust the SUB COL data so that the white and red portions of the PAL colour bar be at the same level. See Fig. 1-1.
4. Clear the adjustment mode.



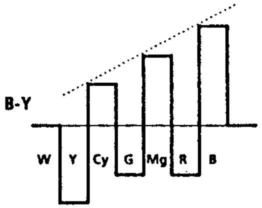
W and R portions to be at the same level

NTSC CHROMA ADJUSTMENTS

SUB-TINT

Service mode: I^2C bus adjustment (SUB TIN)

1. Receive the NTSC colour bar signal.
2. Connect the oscilloscope to TP853 (B-Y).
   - Range: 20 mV/div. (AC)
   - Sweep time: 20 μsec/div.
   (Use a 10:1 probe.)
3. Call the SUB COL mode in the service mode. Adjust the SUB TIN data to obtain the waveform as shown in figure.
4. Clear the adjustment mode.



截止、背景以及副对比度的调整（接上页）

副亮度控制的调试

保养调整状态：I^2C总线调整（副亮度）

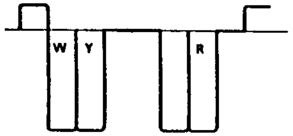
1. 接收单象管图案信号。
2. 调节副亮度控制数据，使窗户图案的1/4（左边的1到5）部分变成全黑。

PAL制式色度信号的调试

副彩色的调试

在服务状态下进行I^2C总线的调试（副彩色）

1. 接收PAL制式彩条信号。
2. 接示波器于TP852（红色阴极）。
   （使用10:1的探针为宜）
   - ●测示范围：2V/段
   - ●扫频时间：20微秒/段
3. 在服务状态下选择副彩色方式，然后，调节副彩色数据，使白色信号与红色信号达至右图所示的同样电平值。
4. 取消此项调整状态的设定。



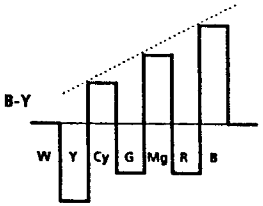
使白色信号与红色信号的电平值相同

NTSC制式色度信号的调试

副色调的调试

在服务状态下进行I^2C总线的调试（副色调）

1. 接收NTSC制式彩条信号。
2. 接示波器于TP853(B-Y)。
   - ●测示范围：20mV/段（交流）
   - ●扫频时间：20微秒/段
   （使用10:1的探针为宜）
3. 在服务状态下选择副彩色方式，然后，调节副色调数据，以获得右图所示的输出波形。
4. 取消此项调整状态的设定。



DEFLECTION LOOP

H-CENTER 50

I²C bus adjustment

1. Receive the monoscope pattern signal.
2. In the service mode, adjust the H-CENT 50 data to align the pattern's center with the CRT's mechanical center.

- When this adjustment is made, correct data is automatically entered for the horizontal center (60 Hz). If the horizontal center is far out of spec with the J-50ch (monoscope pattern) signal, make the H-CENTER 60 adjustment.

H-SIZE : R609

1. Receive the monoscope pattern (E-5 ch) signal.
2. Adjust R609 to get the overscan of 8.5% typical.

V-LIN: R519

1. Receive the monoscope pattern signal.
2. Adjust R519 to have the best vertical linearity.

V-CENT: S501

1. Receive the monoscope pattern signal.
2. Adjust S501 to align the pattern's center with the CRT's mechanical center.

V-SIZE: R511

1. Receive the monoscope pattern signal.
2. Adjust R511 so that the vertical size be the same as the overscan of the horizontal size.

FOCUS: FOCUS CONTROL

1. Receive the monoscope pattern signal.
2. Adjust the focus control to get the best focusing.

Note:
Make this adjustment just after the sub-contrast adjustment.

检波回路的调试

水平中心50

I²C总线的调试

1.接收单象管图案信号。
2.在服务状态下调节“水平中心50”数据，使荧屏中心与阴极显象管的几何中心对齐。

- 进行该项调整时，即自动地被输入有关水平中心(60Hz)的正确数据。该水平中心位置与J-50CH(单象管图案)信号所规定的位置相比，如果有发生显著的偏差，即进行H-CENTER 60调整。

水平尺寸：R609

1.接收单象管图案信号(E-5频道)。
2.调节R609，使过扫描达至8.5%的规定要求。

垂直线性度：R519

1.接收单象管图案信号。
2.调节R519，使垂直线性度达至最佳状态。

垂直中心：S501

1.接收单象管图案信号。
2.调节S501，使荧屏中心与阴极显象管的几何中心对齐。

垂直尺寸：R511

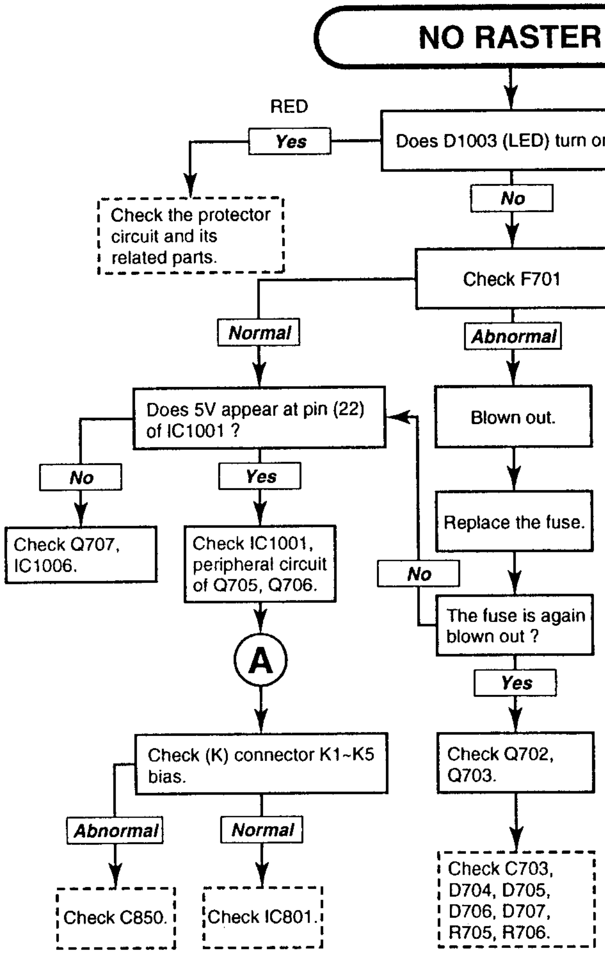
1.接收单象管图案信号。
2.调节R511，使垂直尺寸达至与水平尺寸的过扫描相同的尺寸。

聚焦：聚焦控制

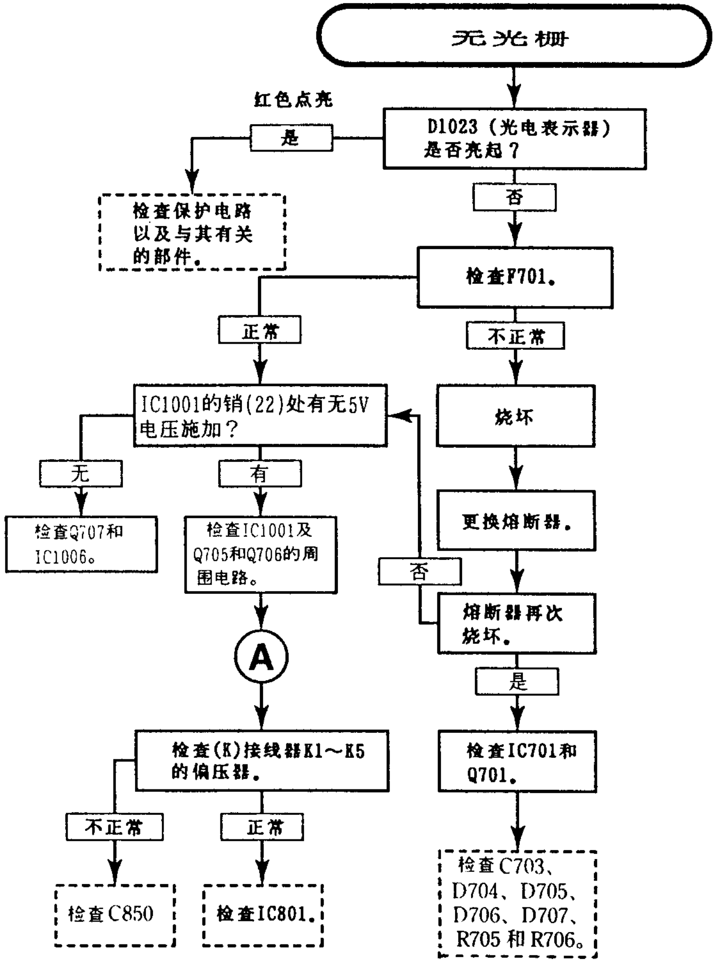
1.接收单象管图案信号。
2.调节聚焦控制，以获得最佳聚焦效果。

注意：此项调试应在副对比度的调试完毕后进行。

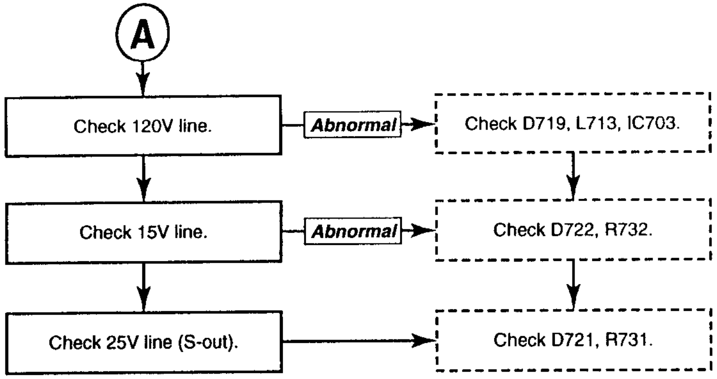
TROUBLE SHOOTING TABLE


NO RASTER
RED
Yes
Does D1003 (LED) turn on ?
Check the protector circuit and its related parts.
No
Check F701
Normal
Abnormal
Does 5V appear at pin (22) of IC1001 ?
Blown out.
No
Yes
Replace the fuse.
Check Q707, IC1006.
Check IC1001, peripheral circuit of Q705, Q706.
No
The fuse is again blown out ?
A
Yes
Check (K) connector K1~K5 bias.
Check Q702, Q703.
Abnormal
Normal
Check C850.
Check IC801.
Check C703, D704, D705, D706, D707, R705, R706.

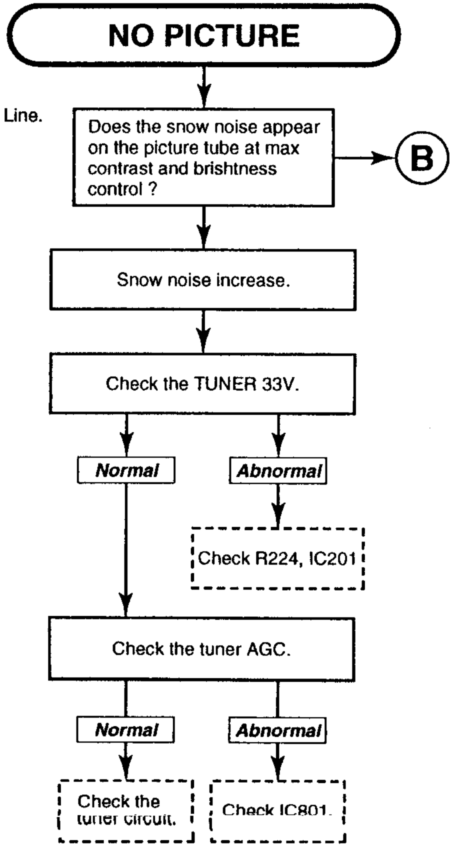
故障检修表


无光栅
红色点亮
是
D1023（光电表示器）是否亮起？
检查保护电路以及与其有关的部件。
否
检查F701。
正常
不正常
IC1001的销(22)处有无5V电压施加？
烧坏
无
有
更换熔断器。
检查Q707和IC1006。
检查IC1001及Q705和Q706的周围电路。
否
熔断器再次烧坏。
A
是
检查(K)接线器K1～K5的偏压器。
检查IC701和Q701。
不正常
正常
检查C850
检查IC801。
检查C703、D704、D705、D706、D707、R705和R706。

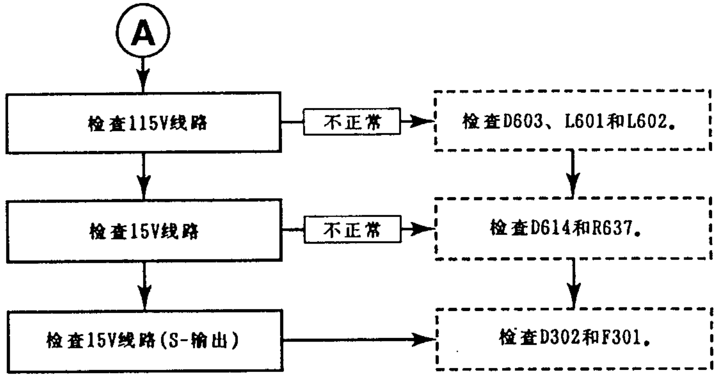
TROUBLE SHOOTING TABLE (Continued)


A
Check 120V line.
Abnormal
Check D719, L713, IC703.
Check 15V line.
Abnormal
Check D722, R732.
Check 25V line (S-out).
Check D721, R731.

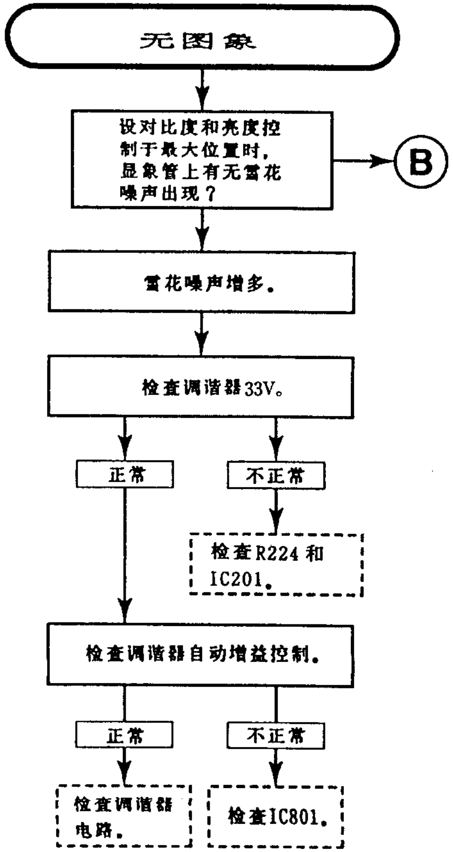
Circuits to be checked:
- A/V circuit.
- Tuner.
- PIF.
- Peripheral circuit of Bus Line.


NO PICTURE
Does the snow noise appear on the picture tube at max contrast and brishtness control ?
B
Snow noise increase.
Check the TUNER 33V.
Normal
Abnormal
Check R224, IC201
Check the tuner AGC.
Normal
Abnormal
Check the tuner circuit.
Check IC801.

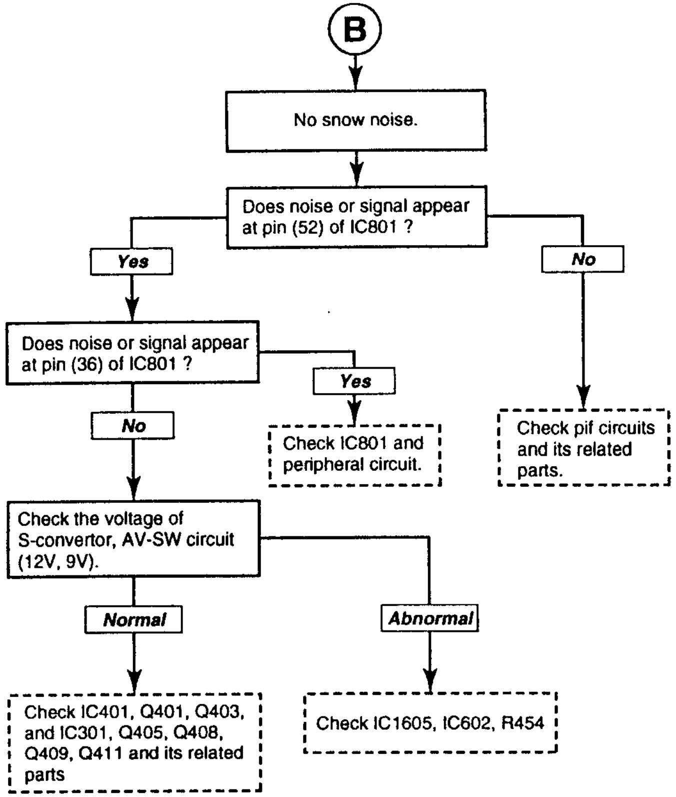
故障检修表(接上页)


A
检查115V线路
不正常
检查D603、L601和L602。
检查15V线路
不正常
检查D614和R637。
检查15V线路(S-输出)
检查D302和F301。

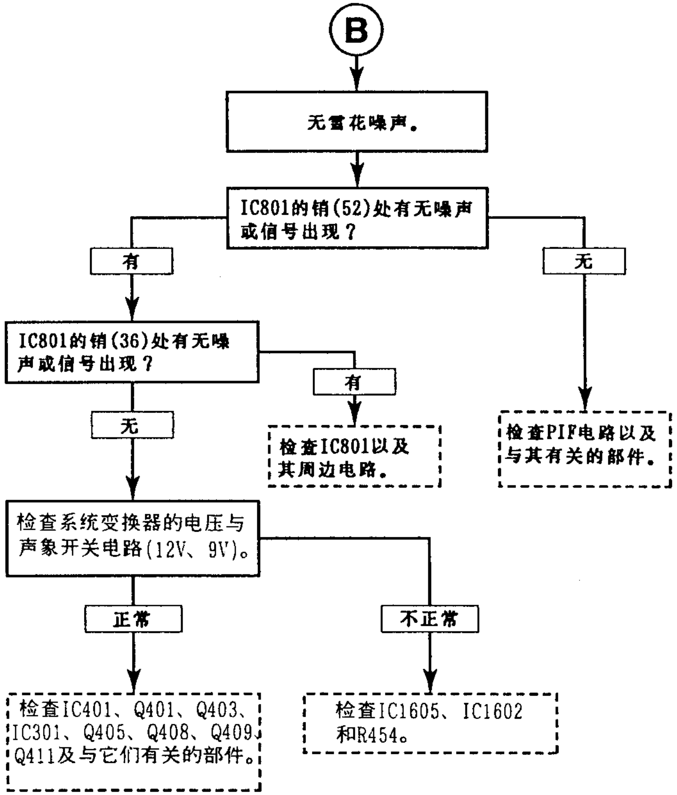
检查电路：
- ●声/象电路
- ●调谐器电路
- ●PIF电路
- ●总线周边电路


无图象
设对比度和亮度控制于最大位置时，显象管上有无雪花噪声出现？
B
雪花噪声增多。
检查调谐器33V。
正常
不正常
检查R224和IC201。
检查调谐器自动增益控制。
正常
不正常
检查调谐器电路。
检查IC801。

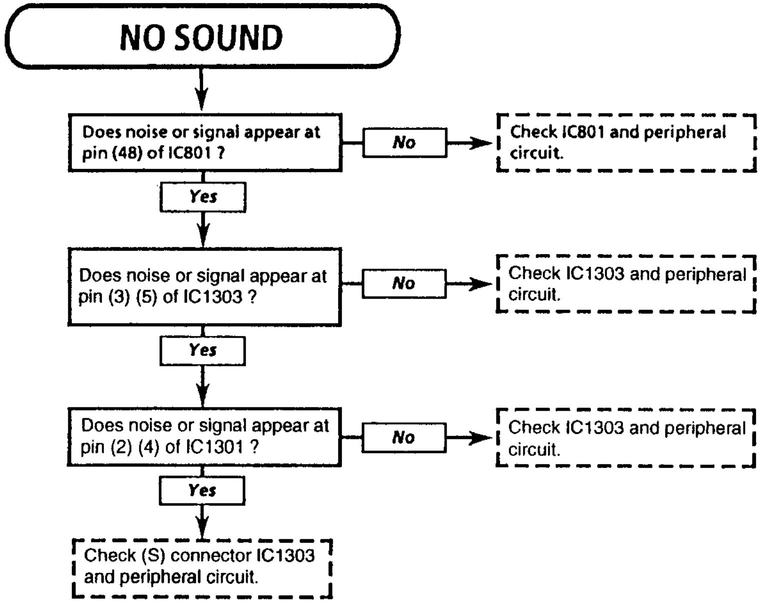
TROUBLE SHOOTING TABLE (Continued)


B
No snow noise.
Does noise or signal appear at pin (52) of IC801 ?
Yes
No
Does noise or signal appear at pin (36) of IC801 ?
Yes
Check IC801 and peripheral circuit.
Check pif circuits and its related parts.
No
Check the voltage of S-convertor, AV-SW circuit (12V, 9V).
Normal
Abnormal
Check IC401, Q401, Q403, and IC301, Q405, Q408, Q409, Q411 and its related parts
Check IC1605, IC602, R454

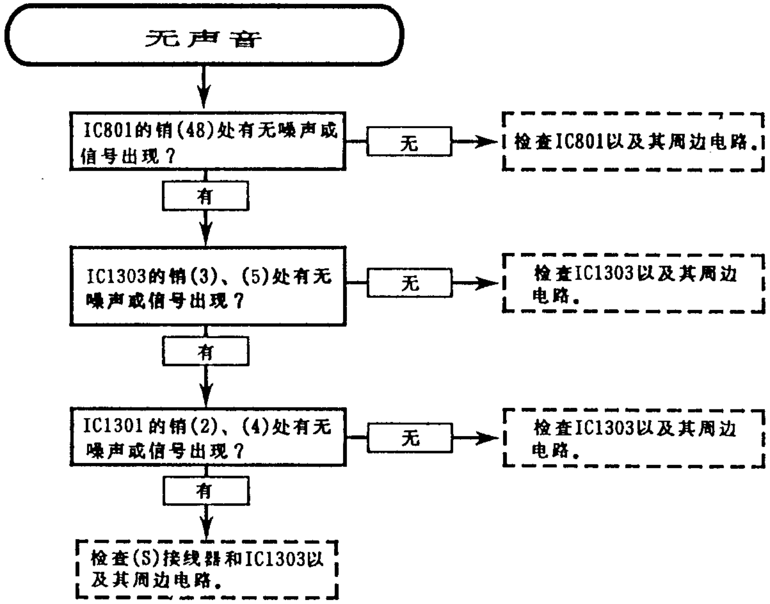
故障检修表（接上页）


B
无雪花噪声。
IC801的销(52)处有无噪声或信号出现？
有
无
IC801的销(36)处有无噪声或信号出现？
有
检查IC801以及其周边电路。
检查PIF电路以及与其有关的部件。
无
检查系统变换器的电压与声象开关电路(12V、9V)。
正常
不正常
检查IC401、Q401、Q403、IC301、Q405、Q408、Q409、Q411及与它们有关的部件。
检查IC1605、IC1602和R454。

TROUBLE SHOOTING TABLE (Continued)

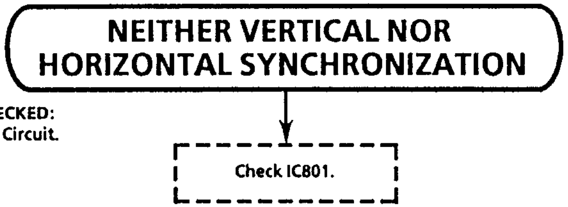

NO SOUND
Does noise or signal appear at pin (48) of IC801 ?
No
Check IC801 and peripheral circuit.
Yes
Does noise or signal appear at pin (3) (5) of IC1303 ?
No
Check IC1303 and peripheral circuit.
Yes
Does noise or signal appear at pin (2) (4) of IC1301 ?
No
Check IC1303 and peripheral circuit.
Yes
Check (S) connector IC1303 and peripheral circuit.

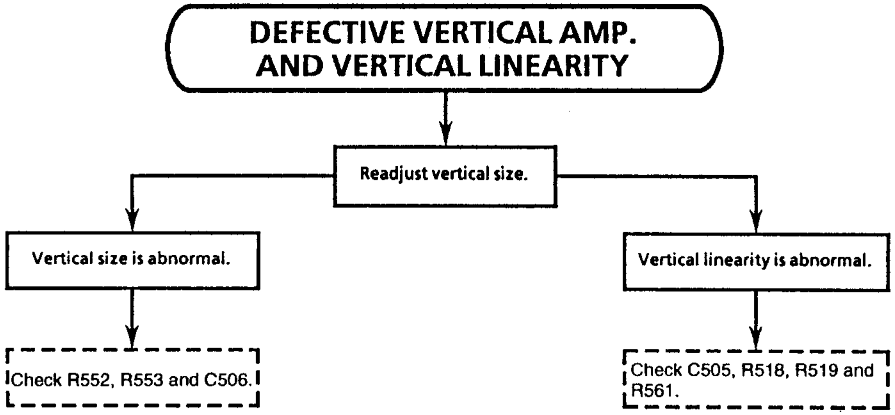
故障检修表（接上页）

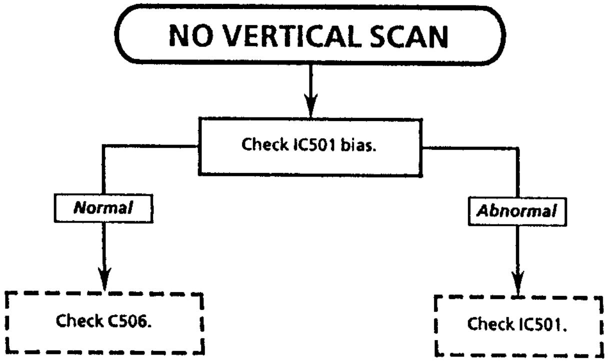

无声音
IC801的销(48)处有无噪声或信号出现？
无
检查IC801以及其周边电路。
有
IC1303的销(3)、(5)处有无噪声或信号出现？
无
检查IC1303以及其周边电路。
有
IC1301的销(2)、(4)处有无噪声或信号出现？
无
检查IC1303以及其周边电路。
有
检查(S)接线器和IC1303以及其周边电路。

TROUBLE SHOOTING TABLE (Continued)

CIRCUIT TO BE CHECKED:
- Sync. Separator Circuit.

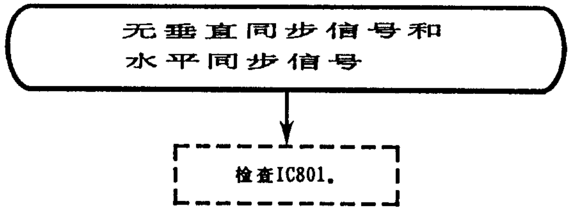

NEITHER VERTICAL NOR HORIZONTAL SYNCHRONIZATION
Check IC801.

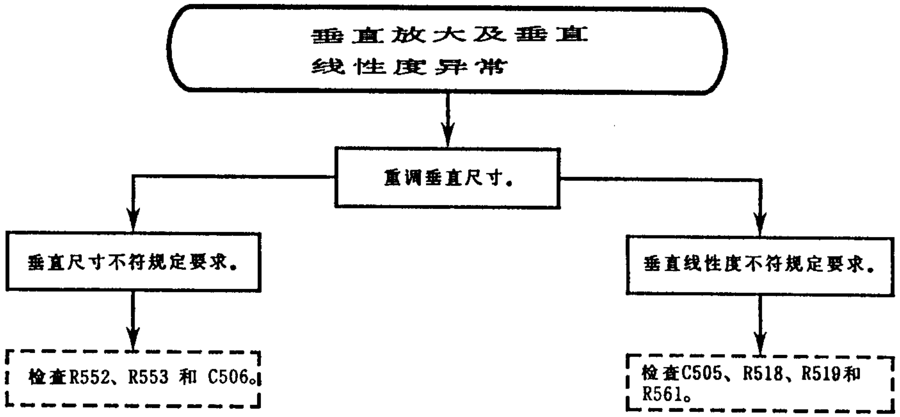

DEFECTIVE VERTICAL AMP. AND VERTICAL LINEARITY
Readjust vertical size.
Vertical size is abnormal.
Vertical linearity is abnormal.
Check R552, R553 and C506.
Check C505, R518, R519 and R561.

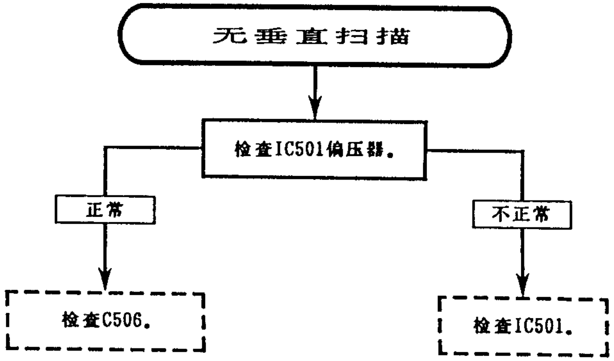

NO VERTICAL SCAN
Check IC501 bias.
Normal
Abnormal
Check C506.
Check IC501.

故障检修表（接上页）

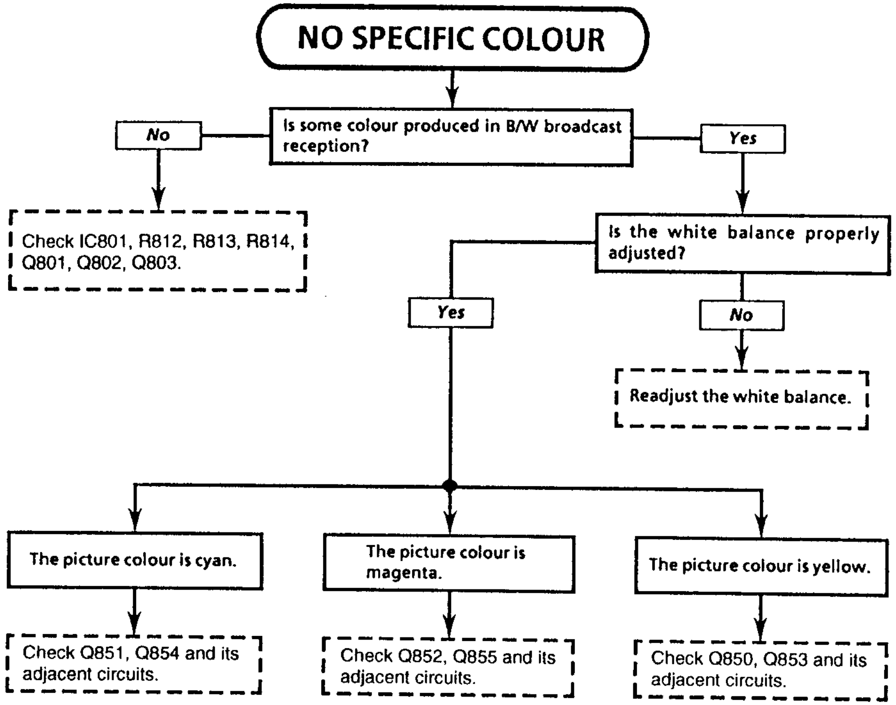
检查电路：
●同步分离电路

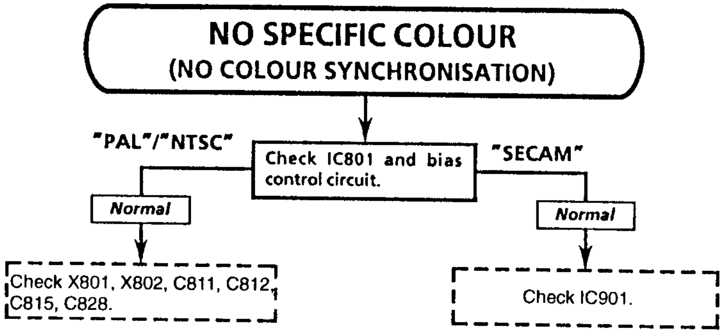

无垂直同步信号和水平同步信号
检查IC801。


垂直放大及垂直线性度异常
重调垂直尺寸。
垂直尺寸不符规定要求。
垂直线性度不符规定要求。
检查R552、R553 和 C506。
检查C505、R518、R519和R561。

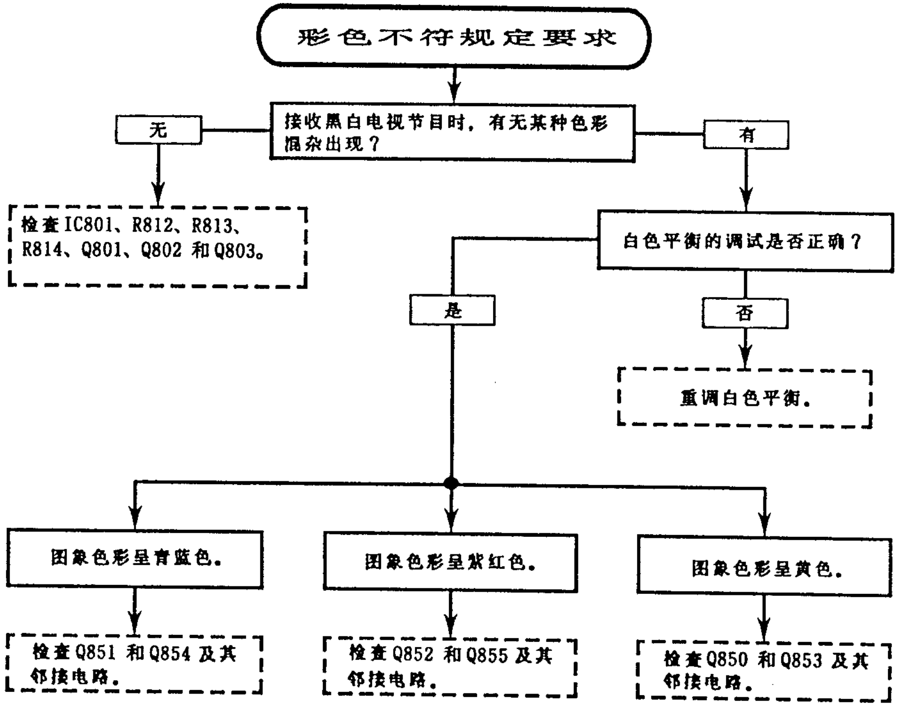

无垂直扫描
检查IC501偏压器。
正常
不正常
检查C506。
检查IC501。

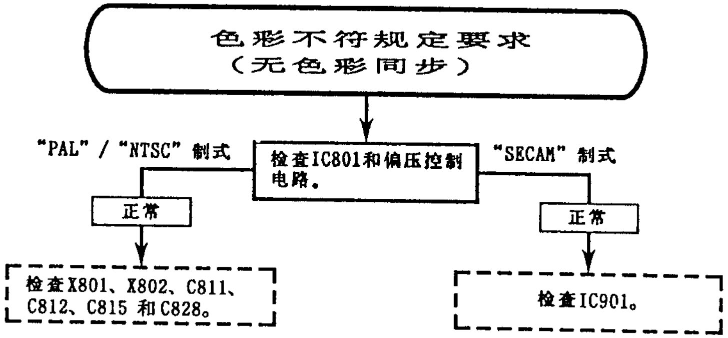
TROUBLE SHOOTING TABLE (Continued)


NO SPECIFIC COLOUR
Is some colour produced in B/W broadcast reception?
No
Check IC801, R812, R813, R814, Q801, Q802, Q803.
Yes
Is the white balance properly adjusted?
Yes
No
Readjust the white balance.
The picture colour is cyan.
Check Q851, Q854 and its adjacent circuits.
The picture colour is magenta.
Check Q852, Q855 and its adjacent circuits.
The picture colour is yellow.
Check Q850, Q853 and its adjacent circuits.

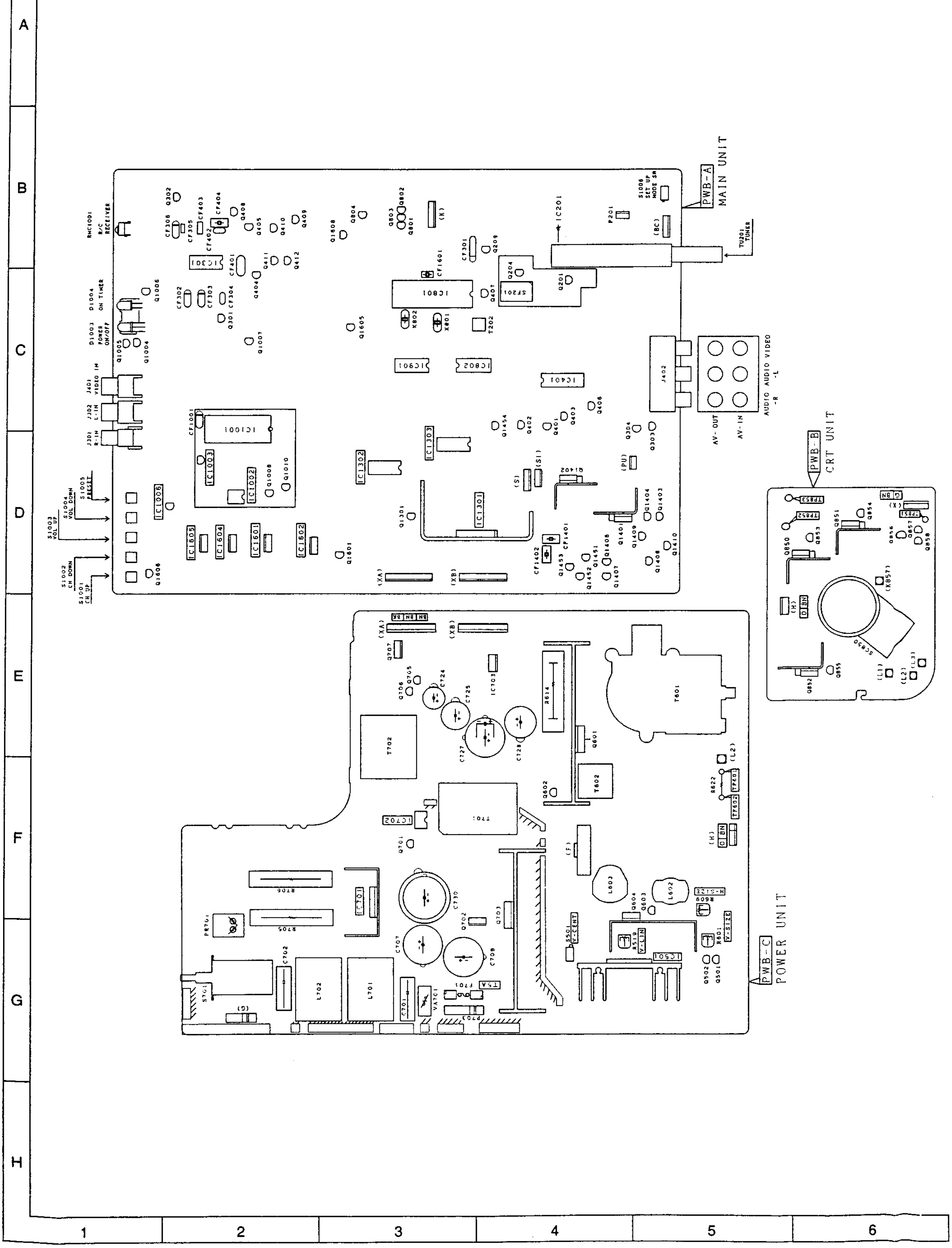

NO SPECIFIC COLOUR
(NO COLOUR SYNCHRONISATION)
"PAL"/"NTSC"
Check IC801 and bias control circuit.
"SECAM"
Normal
Check X801, X802, C811, C812, C815, C828.
Normal
Check IC901.

故障检修表（接上页）


形色不符规定要求
接收黑白电视节目时，有无某种色彩混杂出现？
无
检查IC801、R812、R813、R814、Q801、Q802 和Q803。
有
白色平衡的调试是否正确？
是
否
重调白色平衡。
图象色彩呈青蓝色。
检查Q851 和Q854 及其邻接电路。
图象色彩呈紫红色。
检查Q852 和Q855 及其邻接电路。
图象色彩呈黄色。
检查Q850 和Q853 及其邻接电路。


色形不符规定要求
（无色形同步）
"PAL" / "NTSC" 制式
检查IC801和偏压控制电路。
"SECAM" 制式
正常
检查X801、X802、C811、C812、C815 和C828。
正常
检查IC901。

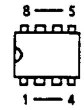
CHASSIS LAYOUT
机芯底盘电路布置


A
B
C
D
E
F
G
H
1
2
3
4
5
6
PWB-A MAIN UNIT
TU201 TUNER
IC201
IC801
IC301
IC401
IC901
IC802
IC1001
IC1002
IC1003
IC1006
IC1301
IC1302
IC1303
IC1601
IC1602
IC1604
IC1605
RMC1001 R/C RECEIVER
D1004 ON TIMER
D1003 POWER ON/OFF
J401 VIDEO IN
J302 L-IN
J301 R-IN
S1005 PRESET
S1004 VOL DOWN
S1003 VOL UP
S1002 CH DOWN
S1001 CH UP
S1006 SET UP MODE SW
J402
AV-OUT
AV-IN
AUDIO -R
AUDIO -L
VIDEO
(XA)
(XB)
PWB-B CRT UNIT
TP851
TP852
TP853
SC850
PWB-C POWER UNIT
T601
T602
T701
T702
L701
L702
L602
L603
IC701
IC702
IC703
IC501
R614
R705
R706
PR701
VA701
F701
T5A
P701
C707
C708
C730
V-CENT
V-LIN
V-SIZE
H-SIZE
TP601
TP602
R622

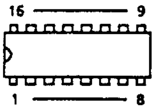
SOLID STATE DEVICE BASE DIAGRAM

固体器件基座图

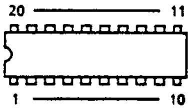
TOP VIEW 俯视图



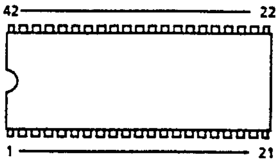
ST24C04



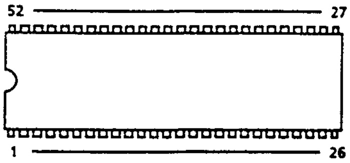
iX1779CE
M5325SP
U3660M



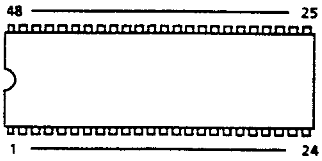
AN7395K
LA7955
M5M44256
M62420SP
TDA3857
TDA8415



iX2611CE

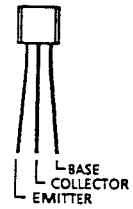


M52340SP
SAA7283Z

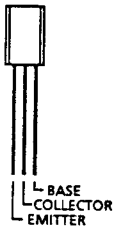


iX2451CE

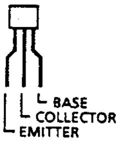
SIDE VIEW 侧视图


BASE
COLLECTOR
EMITTER

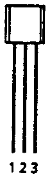
2SA1015
2SC1815
2SC1906
2SC383


BASE
COLLECTOR
EMITTER

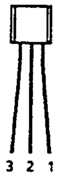
2SC2271


BASE
COLLECTOR
EMITTER

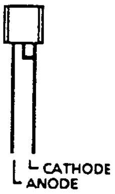
2SC3399
2SC3402



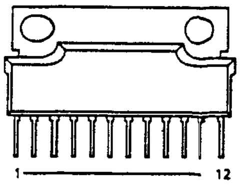
KiA7045P



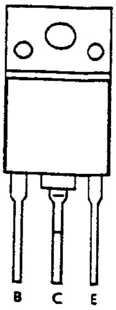
UPC78L05


CATHODE
ANODE

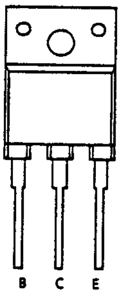
iX0037CE



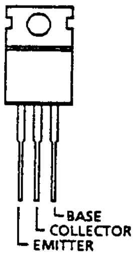
AN7124



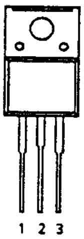
2SD2095



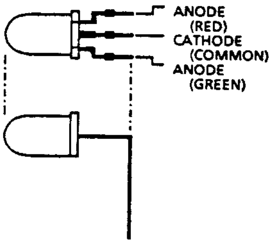
2SD1884


BASE
COLLECTOR
EMITTER

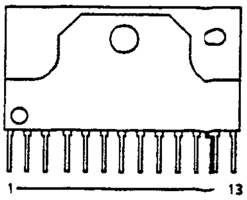
2SD880



TA7805Pi
TA7808Pi
TA7809Pi


ANODE
(RED)
CATHODE
(COMMON)
ANODE
(GREEN)

PX0291CE



LA7838

DESCRIPTION OF SCHEMATIC DIAGRAM

SAFETY NOTE:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.

2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" (▨) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (▬ ▪ ▬) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.

WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER

BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

NOTE:

1. The unit of resistance "ohm" is omitted (K = 1000 ohms, M = Megaohm).

2. All resistors are 1/8 watt, unless otherwise noted.

3. All capacitors are μF, unless otherwise noted (P = μμF).

VOLTAGE MEASUREMENT CONDITIONS:

1. Voltages in parenthesis measured with no Signal.

2. Voltages without parenthesis measured with 3mV B & W or Colour-Signal.

3. All the voltages in each point are measured with VTVM.

WAVEFORM MEASUREMENT CONDITIONS:

1. Colour bar generator signal of 2.2 V peak to peak applied at pin (52) of IC801.

2. Approximately 4.0 V AGC bias.

电路原理图的说明

安全注意事项：

1. 更换电路元件时，必须先拔出电源插头，切断电源。
2. 机芯底盘电路处工作状态时，应注意电路中半导体元件散热片高电位可能导致的电击危险。

安全使用注意要点：

标有“⚠”（▨）的元件为对保证本机长久的安全使用起重要的元件。更换这些元件时，必须使用规定的纯正正牌元件，以保证本机的使用安全以及使用寿命。

维修注意事项：

电路中由点划线（ ▬ ▪ ▬ ）所围部分为与交流电源直接相接线路。对这些部分的线路进行维修时，应于本机与交流电源之间用隔离变压器相接，以防止不意的电击之危险。

电路单位说明：

1. 电阻欧姆(Ω)单位予以略记(K=千欧姆，M=兆欧姆)。
2. 除特别说明者外，图中电阻功率均为1/8瓦特。
3. 除特别说明者(P=微微法拉)外，图中电容单位均为μF(微法拉)。

电压测定条件：

1. 括号中的电压值为无信号状态下所测。
2. 括号外的电压值为3mV黑白或彩色信号状态下所测。
3. 所有测点的电压值均为电子管电压计VTVM所测。

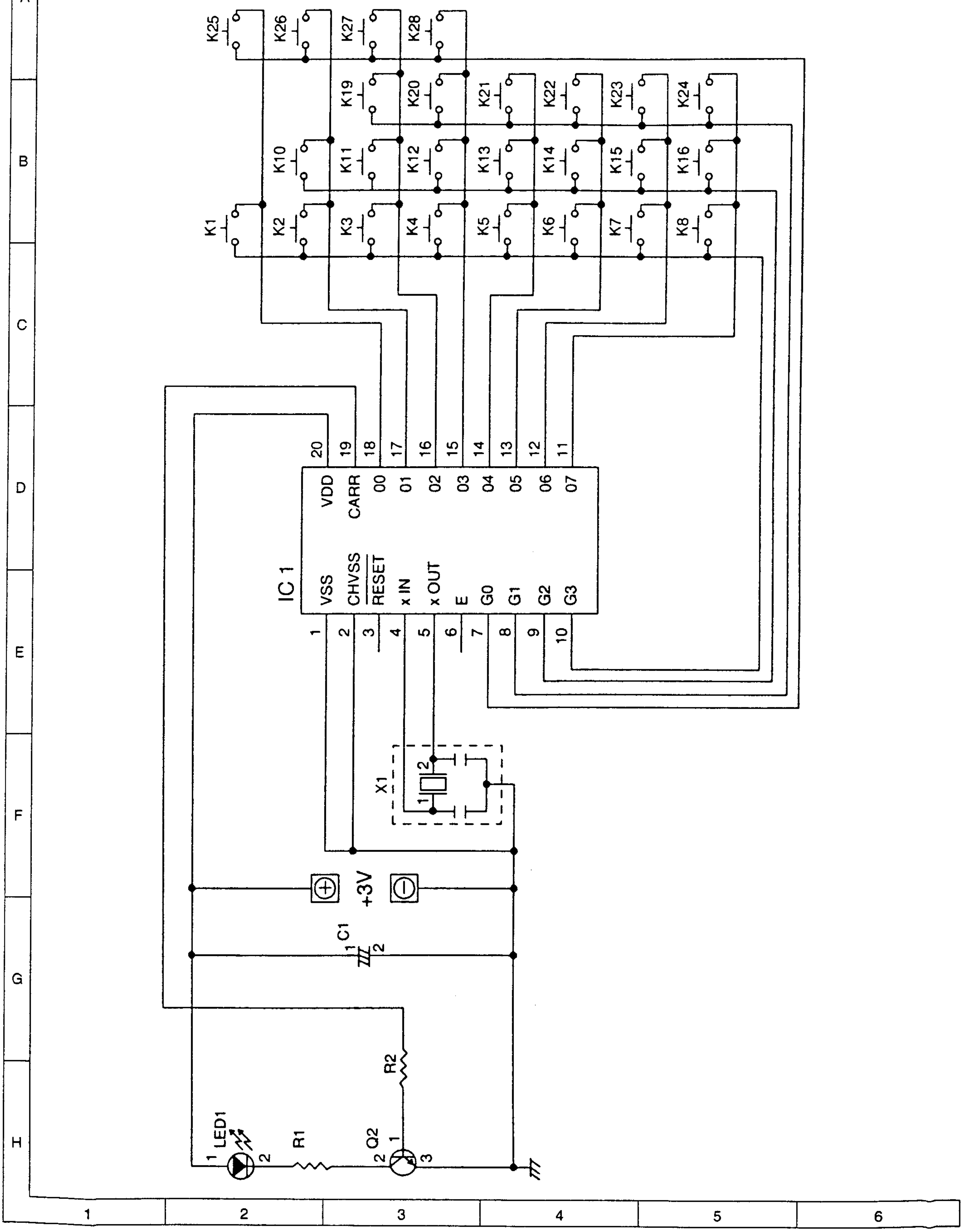
波形测定条件：

1. 施加2.2Vp-p的彩条发生器信号于IC801的销(52)处的基极。
2. 自动增益控制偏压约为4.0V。

■ Infrared Remote Control Unit 红外线遥控器

RRMCG1274PESA

NOTE: The parts here shown are supplied as an assembly but not independently.
注意：在更换零件订货时，请以一套为最小单位，切勿以单件订货。

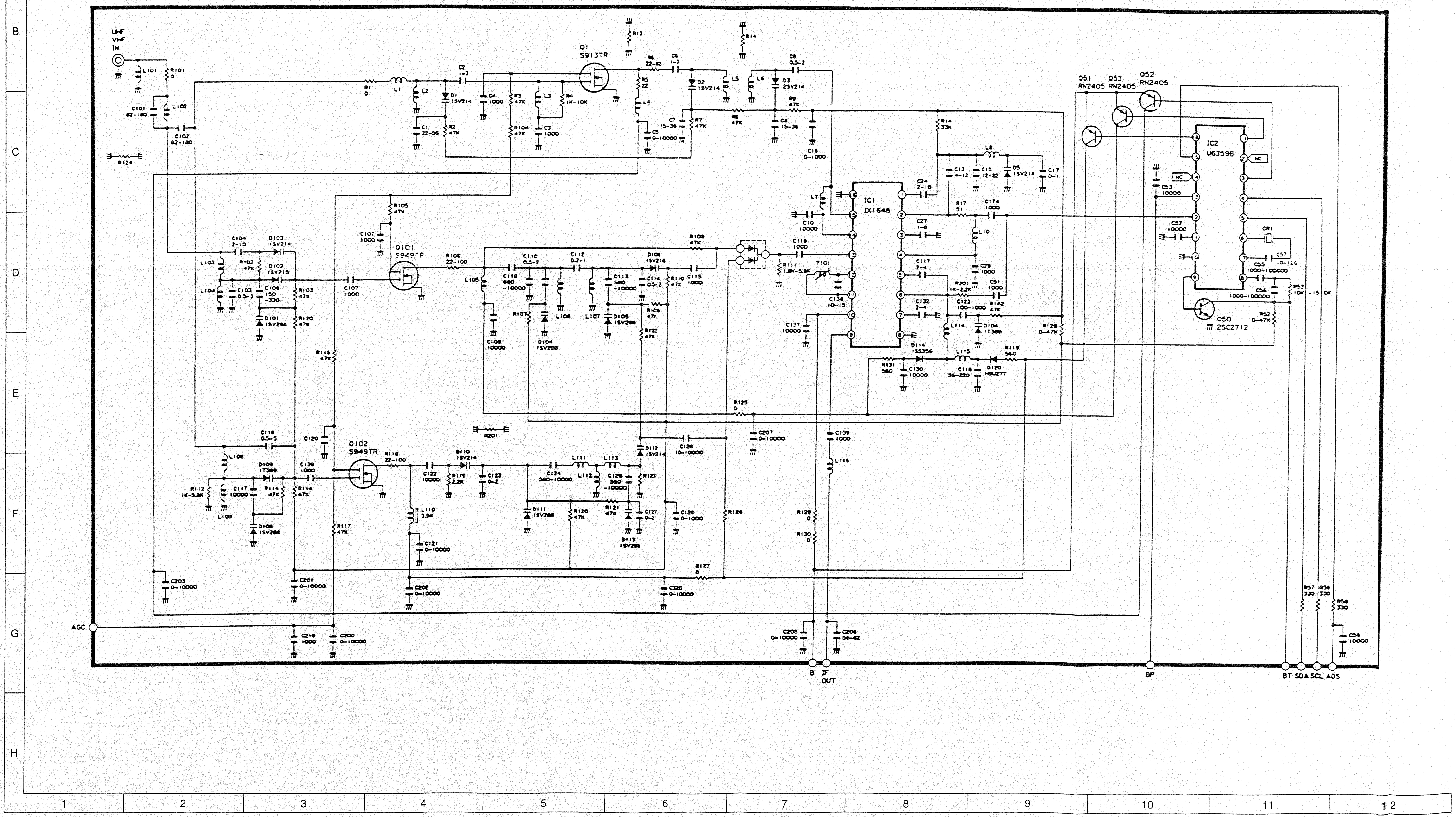

A
B
C
D
E
F
G
H
1
2
3
4
5
6
K25
K26
K27
K28
K19
K20
K21
K22
K23
K24
K10
K11
K12
K13
K14
K15
K16
K1
K2
K3
K4
K5
K6
K7
K8
IC 1
20 VDD
19 CARR
18 00
17 01
16 02
15 03
14 04
13 05
12 06
11 07
1 VSS
2 CHVSS
3 RESET
4 x IN
5 x OUT
6 E
7 G0
8 G1
9 G2
10 G3
X1
1
2
+3V
C1
1
2
R2
LED1
1
2
R1
Q2
1
2
3

Tuner 调谐器

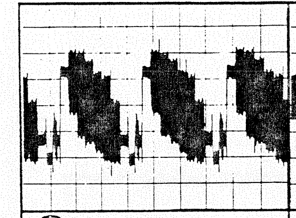
NOTE: The parts here shown are supplied as an assembly but not independently.

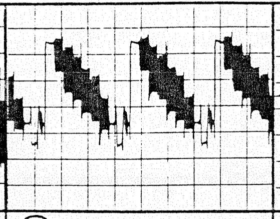
注意：在更换零件订货时，请以一套为最小单位，切勿以单件订货。

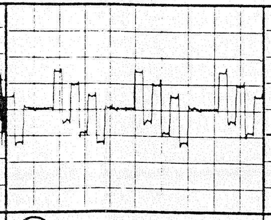
⚠VTUVTSR6HD64/

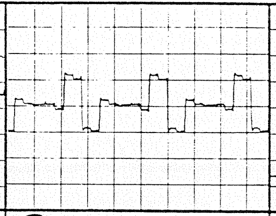

UHF
VHF
IN
AGC
B
IF
OUT
BP
BT
SDA
SCL
ADS
Q1
S913TR
Q101
S949TP
Q102
S949TR
IC1
IX1648
IC2
U6359B
Q51
RN2405
Q53
RN2405
Q52
RN2405
Q50
2SC2712
T101
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
11
12

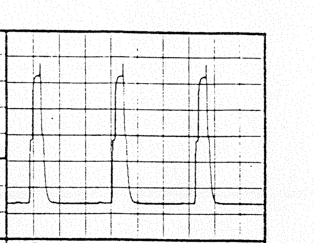
WAVEFORMS
波形图

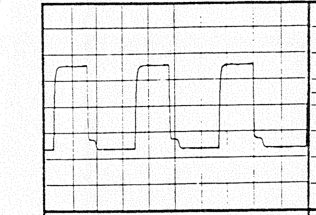

① 2.3 Vp-p (H)
Video out

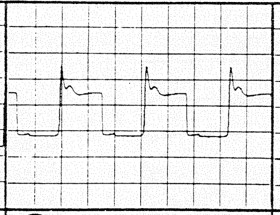

② 1.1 Vp-p (H)
TV-IN

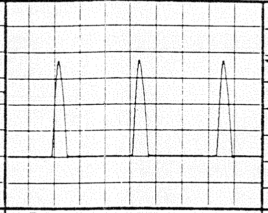

③ 1.1 Vp-p (H)
B-Y IN

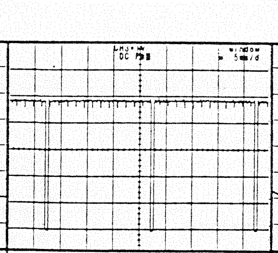

④ 1.2 Vp-p (H)
R-Y IN

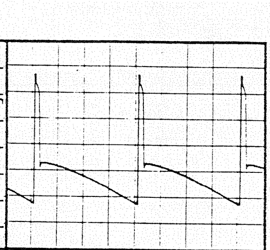

⑤ 5.2 Vp-p(H)
SCP

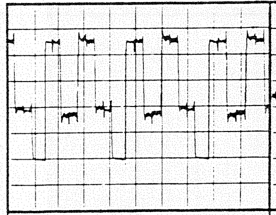

⑥ 2.4 Vp-p (H)
H-PULSE

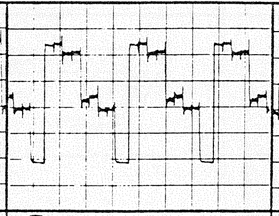

⑦ 30 Vp-p (H)
H-DRIVE

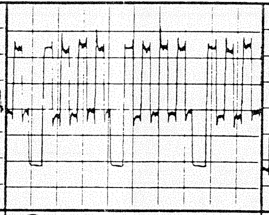

⑧ 1150 Vp-p (H)
H-OUT

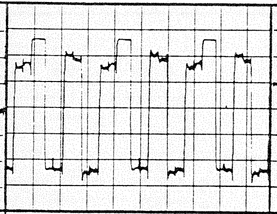

⑨ 4.8 Vp-p (V)
V-PULSE

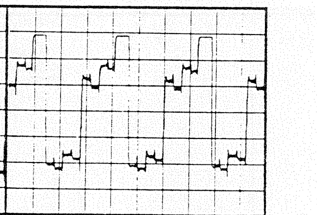

⑩ 52 Vp-p (V)
V-OUT

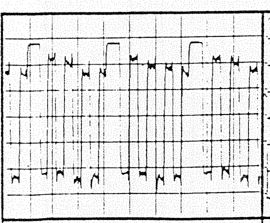

⑪ 5.5 Vp-p (H)
RED

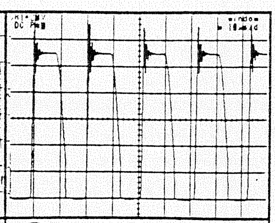

⑫ 5.4 Vp-p
BLUE


⑬ 5.5 Vp-p (H)
GRREN


⑭ 120 Vp-p (H)
CRT-R

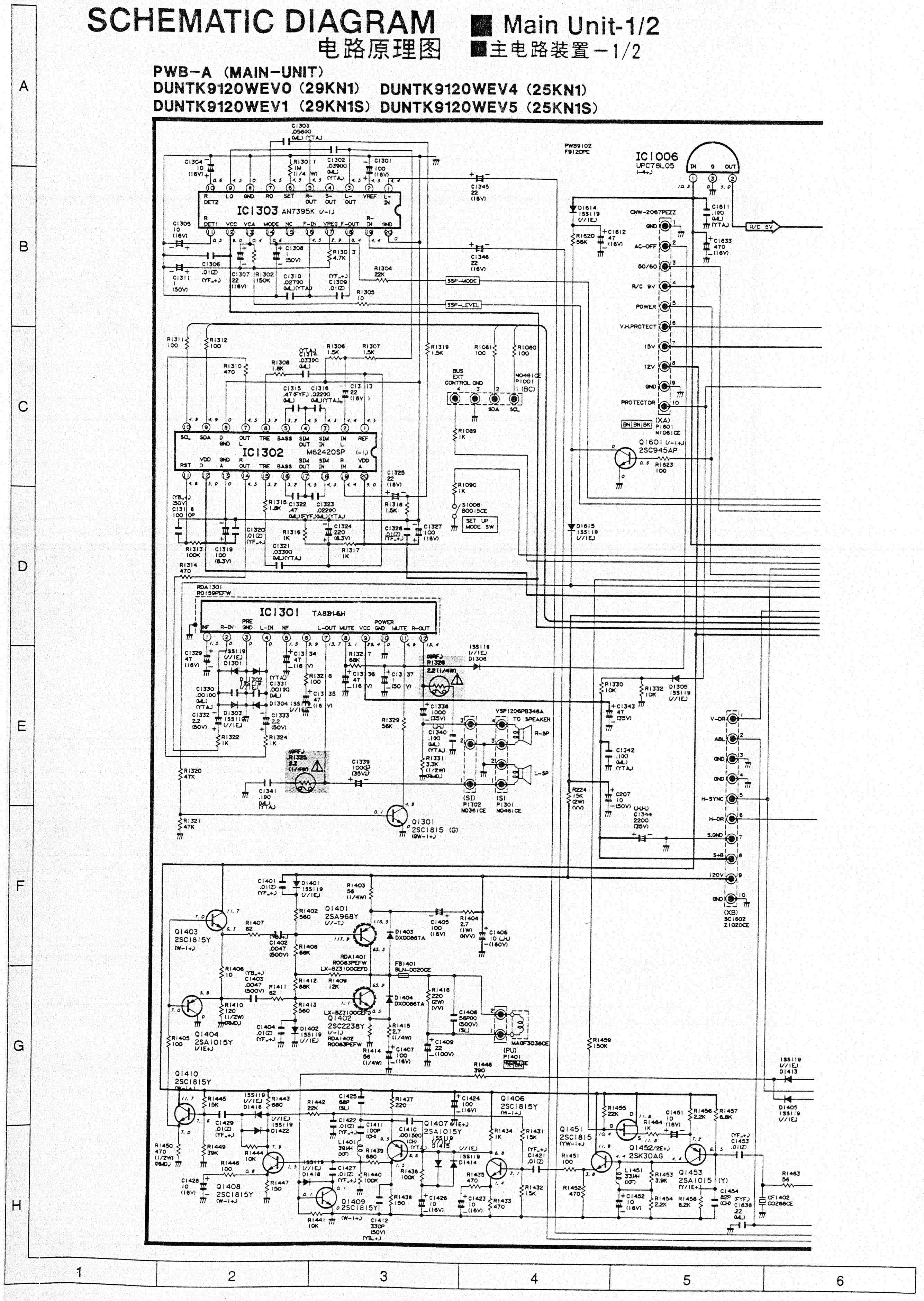

⑮ 122 Vp-p (H)
CRT-G


⑯ 126 Vp-p (H)
CRT-B


⑰ 690 Vp-p

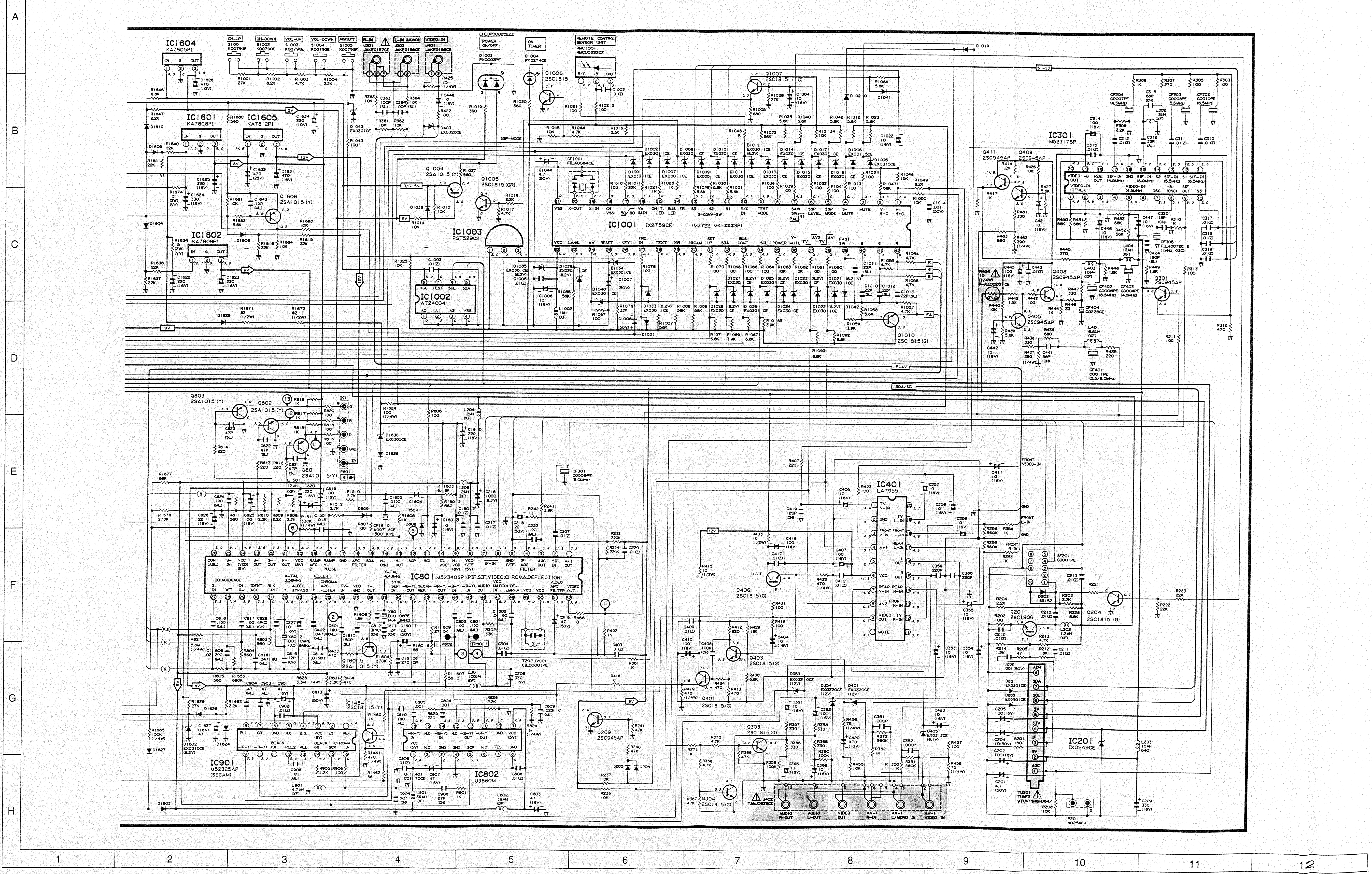
SCHEMATIC DIAGRAM ■ Main Unit-1/2
电路原理图 ■主电路装置－1/2

PWB-A (MAIN-UNIT)
DUNTK9120WEV0 (29KN1) DUNTK9120WEV4 (25KN1)
DUNTK9120WEV1 (29KN1S) DUNTK9120WEV5 (25KN1S)


A
B
C
D
E
F
G
H
1
2
3
4
5
6
IC1303 AN7395K
IC1302 M62420SP
IC1301 TA8914H
IC1006 UPC78L05
Q1601 2SC945AP
Q1301 2SC1815
Q1401 2SA968Y
Q1402 2SC2238Y
Q1403 2SC1815Y
Q1404 2SA1015Y
Q1406 2SC1815Y
Q1407 2SA1015Y
Q1408 2SC1815Y
Q1409 2SC1815Y
Q1410 2SC1815Y
Q1451 2SC1815
Q1452 2SK30AG
Q1453 2SA1015
R-SP
L-SP
TO SPEAKER
SET UP MODE SW
BUS EXT CONTROL
V.H.PROTECT
PROTECTOR
POWER
AC-OFF
R/C 9V
R/C 5V
15V
12V
GND
V-DR
ABL
H-SYNC
H-DR
120V
SSP-MODE
SSP-LEVEL

SCHEMATIC DIAGRAM ■ Main Unit-2/2

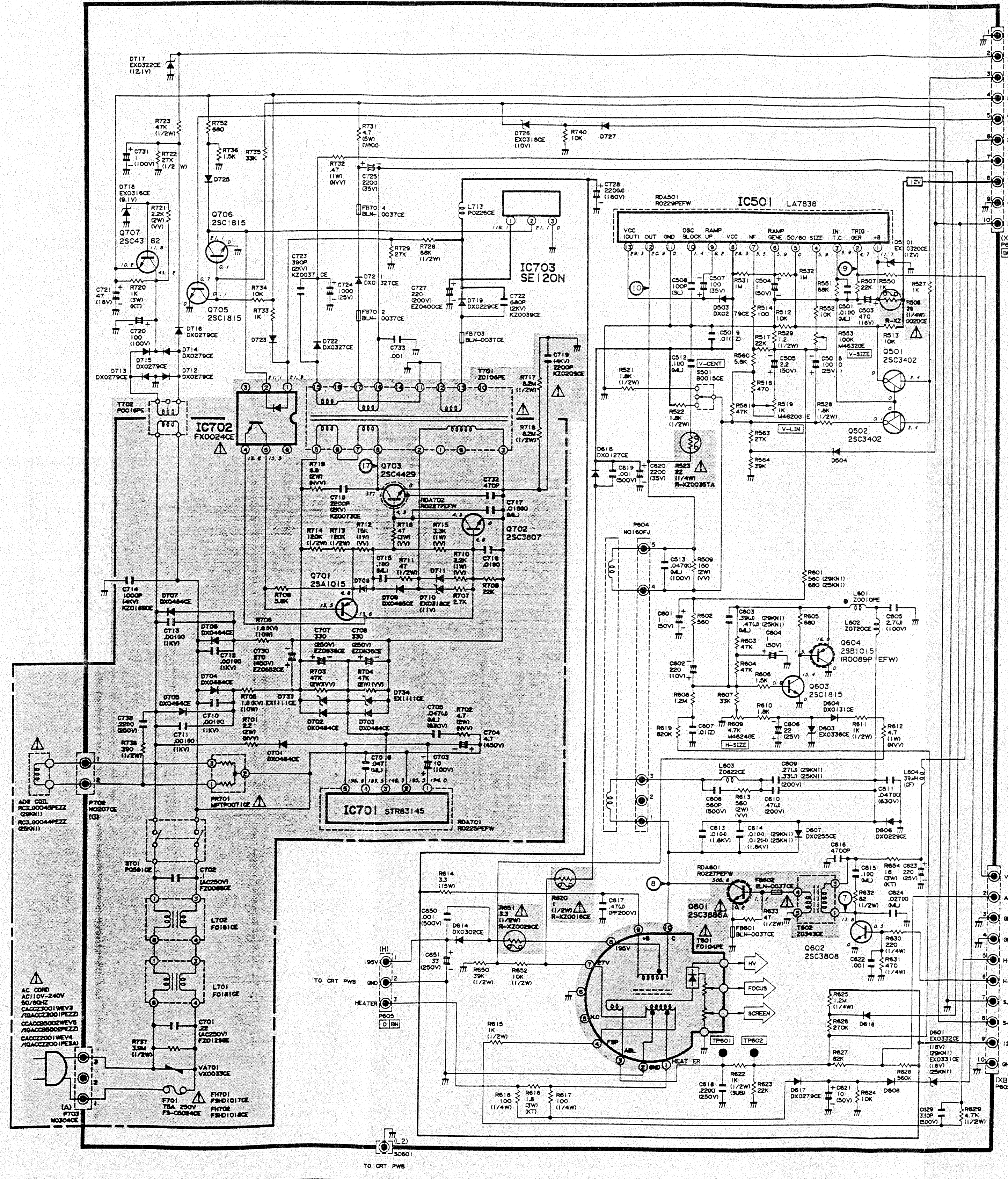
电路原理图 ■主电路装置－2/2


A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
11
12
IC1604 KA7805PI
IC1601 KA7808PI
IC1605 KA7812PI
IC1602 KA7809PI
IC1003 PST529C2
IC1002 AT24C04
IC1001 IX2759CE (M37221M4-XXXSP)
IC301 M52317SP
IC801 M52340SP (PIF,SIF,VIDEO,CHROMA,DEFLECTION)
IC901 M52325AP (SECAM)
IC802 U3660M
IC401 LA7955
IC201 IX0249CE
CH-UP
CH-DOWN
VOL-UP
VOL-DOWN
PRESET
POWER ON/OFF
ON TIMER
REMOTE CONTROL SENSOR UNIT RMC1001 RHC022CE
Q1004 2SA1015(Y)
Q1005 2SC1815(GR)
Q1006 2SC1815
Q1007 2SC1815
Q1010 2SC1815(G)
Q1606 2SA1015(Y)
Q411 2SC945AP
Q409 2SC945AP
Q408 2SC945AP
Q405 2SC945AP
Q301 2SC945AP
Q803 2SA1015(Y)
Q802 2SA1015(Y)
Q801 2SA1015(Y)
Q1605 2SA1015(Y)
Q1454 2SC1815(Y)
Q406 2SC1815(G)
Q403 2SC1815(G)
Q401 2SC1815(G)
Q303 2SC1815(G)
Q304 2SC1815(G)
Q209 2SC945AP
Q201 2SC1906
Q204 2SC1815(G)
TU201 TUNER
FRONT VIDEO-IN
AUDIO R-OUT
AUDIO L-OUT
VIDEO OUT
AV-1 R-IN
AV-1 L/MONO IN
AV-1 VIDEO IN
P201 HO254AFJ
5V
6V
8V
9V
12V
SDA/SCL
F-AV

MODEL 25KN1 and 29KN1 SCHEMATIC DIAGRAM 电路原理图

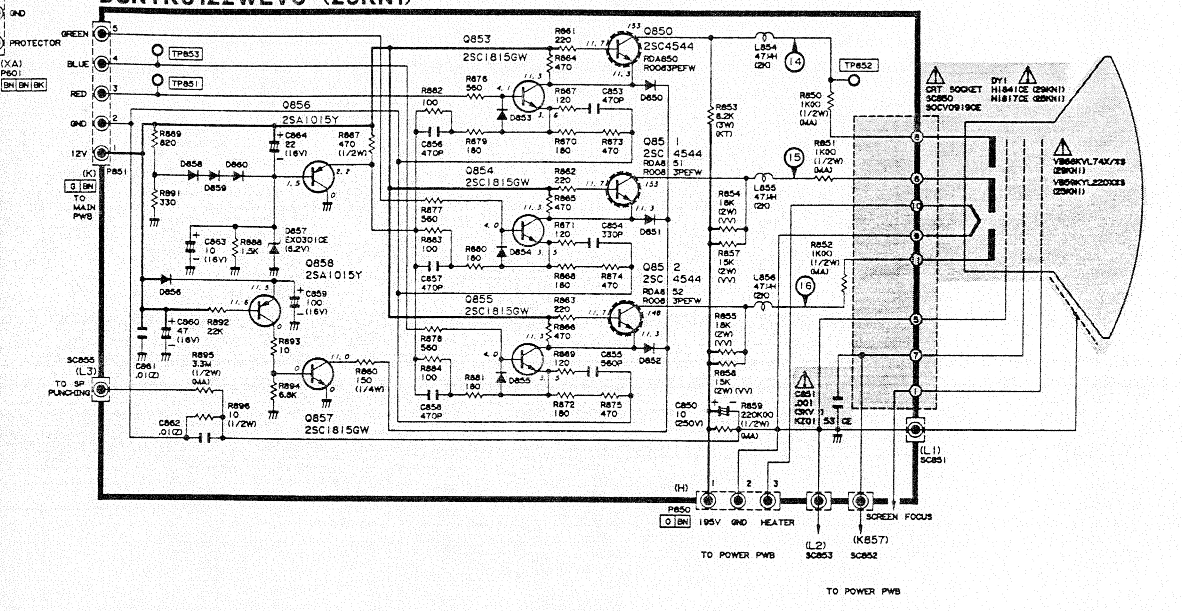
■ Power and CRT Socket Unit
■ 电源、CRT管座电路装置

PWB-C (POWER UNIT)
DUNTK9121WEV4 (25KN1)
DUNTK9121WEV0 (29KN1)


IC501 LA7838
IC702 FX0024CE
IC703 SE120N
IC701 STR83145
Q701 2SA1015
Q702 2SC3807
Q703 2SC4429
Q705 2SC1815
Q706 2SC1815
Q707 2SC4382
Q501 2SC3402
Q502 2SC3402
Q601 2SC3886A
Q602 2SC3808
Q603 2SC1815
Q604 2SB1015
T701 ZD104PE
T702 F0016PE
T601 F0104PE
ADG COIL
AC CORD AC110V-240V 50/60Hz
F701 T5A 250V
GND
AC-OFF
50/60
MICON 5V
POWER MICON
H.V.PROTECT
15V
12V
GND
PROTECTOR
V-DR
ABL
H-SYNC
H-DR
S.GND
S+B
120V
GND
TO CRT PWB
195V
HEATER
V-CENT
V-SIZE
H-SIZE
V-LIN
HV
FOCUS
SCREEN
TP601
TP602

NOTE : 1. THE UNIT OF RESISTANCE OHM IS OMITTED
(K=1000 OHMS. M=MEGAOHM).
2. ALL RESISTORS ARE 1/8WATT. UNLESS OTHERWISE NOTED.
3. ALL CAPACITORS ARE μF, UNLESS OTHERWISE NOTED (P=μμF).
4. ALL DIODES ARE 1SS119, UNLESS OTHERWISE NOTED.

PWB-B (CRT UNIT)
DUNTK9122WEV4 (25KN1)
DUNTK9122WEV0 (29KN1)


Q850 2SC4544
Q851 2SC4544
Q852 2SC4544
Q853 2SC1815GW
Q854 2SC1815GW
Q855 2SC1815GW
Q856 2SA1015Y
Q857 2SC1815GW
Q858 2SA1015Y
TP853
TP851
TP852
GREEN
BLUE
RED
GND
12V
TO MAIN PWB
TO SP PUNCHING
CRT SOCKET
DY1 H1841CE (29KN1) H1817CE (25KN1)
VB68KVL74X/XS (29KN1) VB59KYL220XXS (25KN1)
195V
GND
HEATER
SCREEN
FOCUS
TO POWER PWB

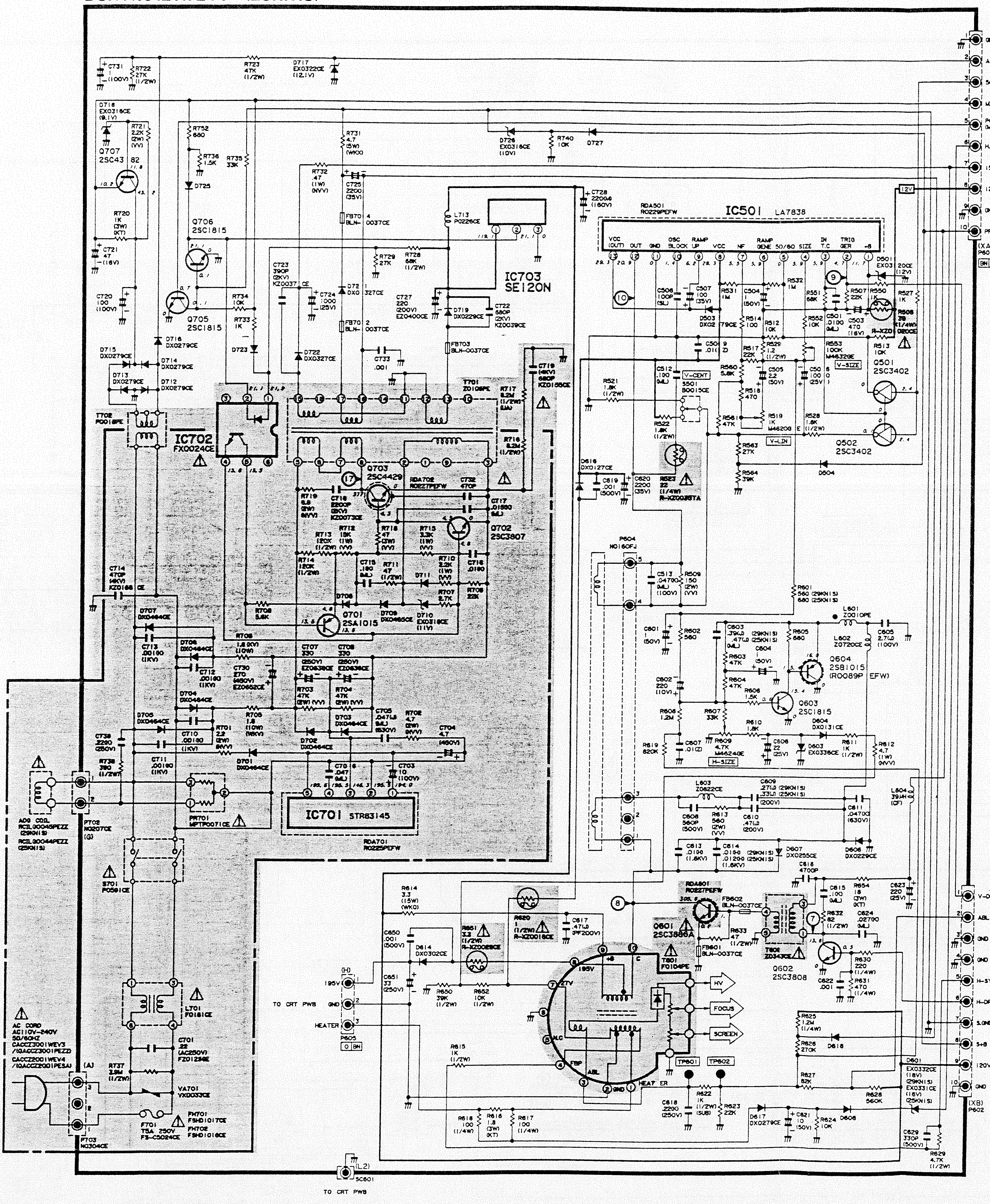
DIFFERENCE (29KN1 ↔ 25KN1)

MODEL / REF.NO.	29KN1	25KN1
CRT	VB68KVL74X/XS	VB59KYL220XXS
DY1	H1841CE	H1817CE
ADG COIL	RCILG0045PEZZ	RCILG0044PEZZ
R552	10K	JUMPER
R601	560	680
C603	.39 (ML)	.47 (ML)
C609	.27 (200V)	.33 (200V)
C614	.01 (1.8KV)	.012 (1.8KV)
D601	EX0332CE (18V)	EX0331CE (18V)

MODEL 25KN1S and 29KN1S SCHEMATIC DIAGRAM ■ Power and CRT Socket Unit

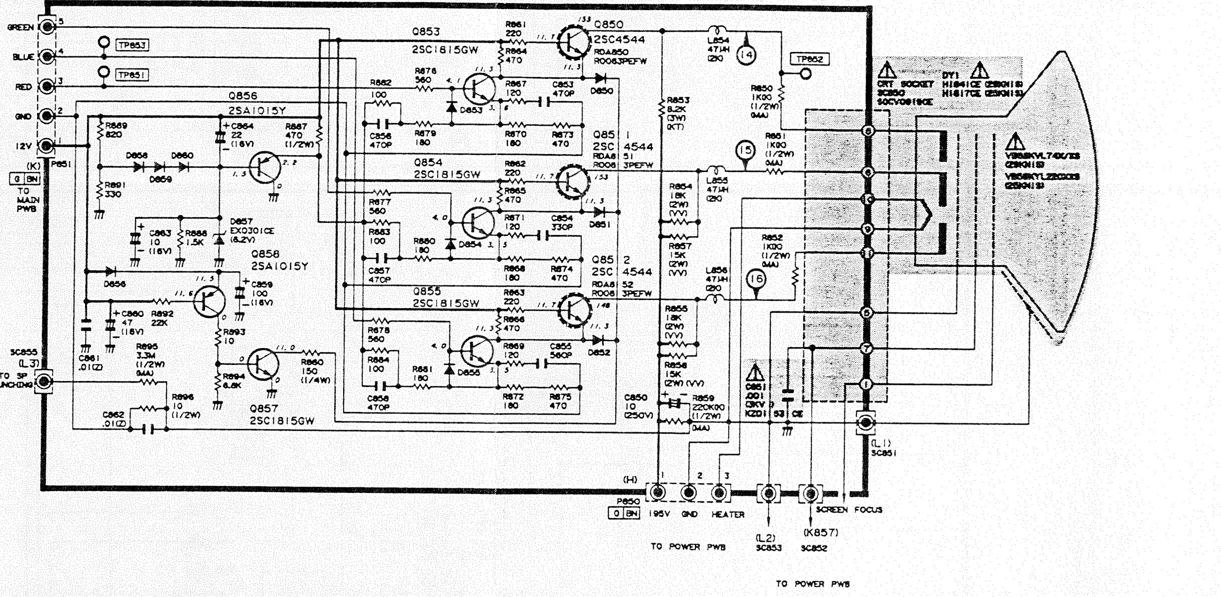
电路原理图 ■ 电源、CRT管座电路装置

PWB-C (POWER UNIT)
DUNTK9121WEV5 (25KN1S)
DUNTK9121WEV1 (29KN1S)


IC501 LA7838
IC703 SE120N
IC702 FX0024CE
IC701 STR83145
Q707 2SC43 82
Q706 2SC1815
Q705 2SC1815
Q703 2SC4429
Q702 2SC3807
Q701 2SA1015
Q501 2SC3402
Q502 2SC3402
Q604 2SB1015
Q603 2SC1815
Q601 2SC3866A
Q602 2SC3808
T701
T601
GND
AC-OFF
50/60
MICON 9V
POWER MICON
H.V.PROTECT
15V
12V
GND
PROTECTOR
(XA) P601
V-DR
ABL
GND
H-SYNC
H-DR
S.GND
5+B
120V
(XB) P602
TO CRT PWB
195V
GND
HEATER
P605
HV
FOCUS
SCREEN
TP601
TP602
AC CORD AC110V-240V 50/60HZ
(L2) SC601
TO CRT PWB

NOTE : 1. THE UNIT OF RESISTANCE OHM IS OMITTED (K=1000 OHMS. M=MEGAOHM).
2. ALL RESISTORS ARE 1/8WATT, UNLESS OTHERWISE NOTED.
3. ALL CAPACITORS ARE µF, UNLESS OTHERWISE NOTED (P=µµF).
4. ALL DIODES ARE 1SS119, UNLESS OTHERWISE NOTED.

PWB-B (CRT UNIT)
DUNTK9122WEV5 (25KN1S)
DUNTK9122WEV1 (29KN1S)


GREEN
BLUE
RED
GND
12V
(K) P851
TO MAIN PWB
SC855 (L3)
TO SP PUNCHING
Q853 2SC1815GW
Q854 2SC1815GW
Q855 2SC1815GW
Q850 2SC4544
Q851 2SC4544
Q852 2SC4544
Q856 2SA1015Y
Q858 2SA1015Y
Q857 2SC1815GW
TP853
TP851
TP852
CRT SOCKET SC850
DY1
(H) P850
195V
GND
HEATER
SCREEN
FOCUS
TO POWER PWB
(L2) SC853
(K857) SC852
(L1) SC851
TO POWER PWB

DIFFERENCE (29KN1S ↔ 25KN1S)

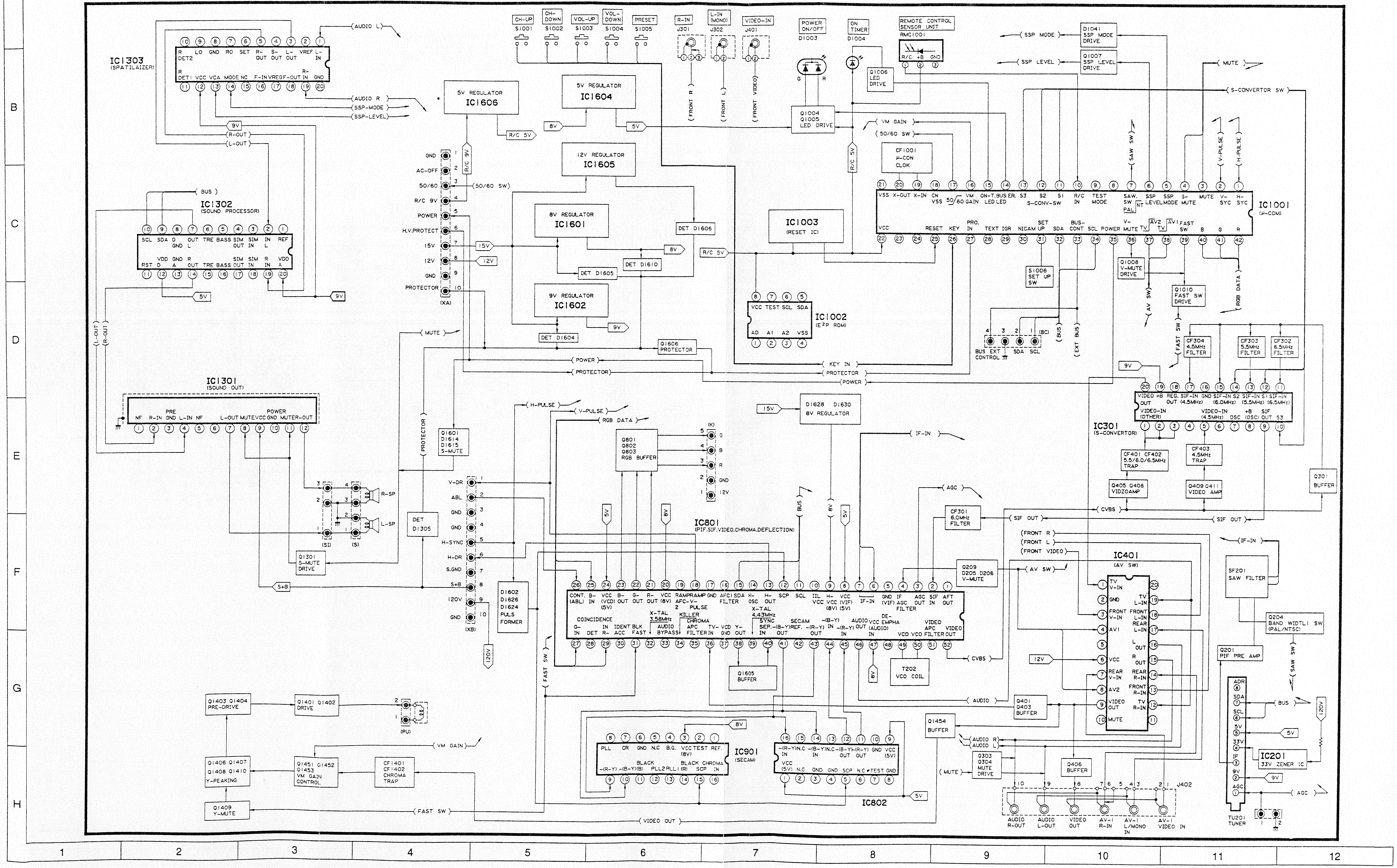
REF.NO. \ MODEL	29KN1S	25KN1S
CRT	VB68KVL74X/XS	VB59KYL220XXS
DY1	H1841CE	H1817CE
ADG COIL	RCILG0045PEZZ	RCILG0044PEZZ
R552	10K	JUMPER
R601	560	680
C603	.39 (ML)	.47 (ML)
C609	.27 (200V)	.33 (200V)
C614	.01 (1.6KV)	.012 (1.6KV)
D601	EX0332CE (18V)	EX0331CE (16V)

BLOCK DIAGRAM
整体电路方框图

☐ Main Unit
☐ 主电路装置

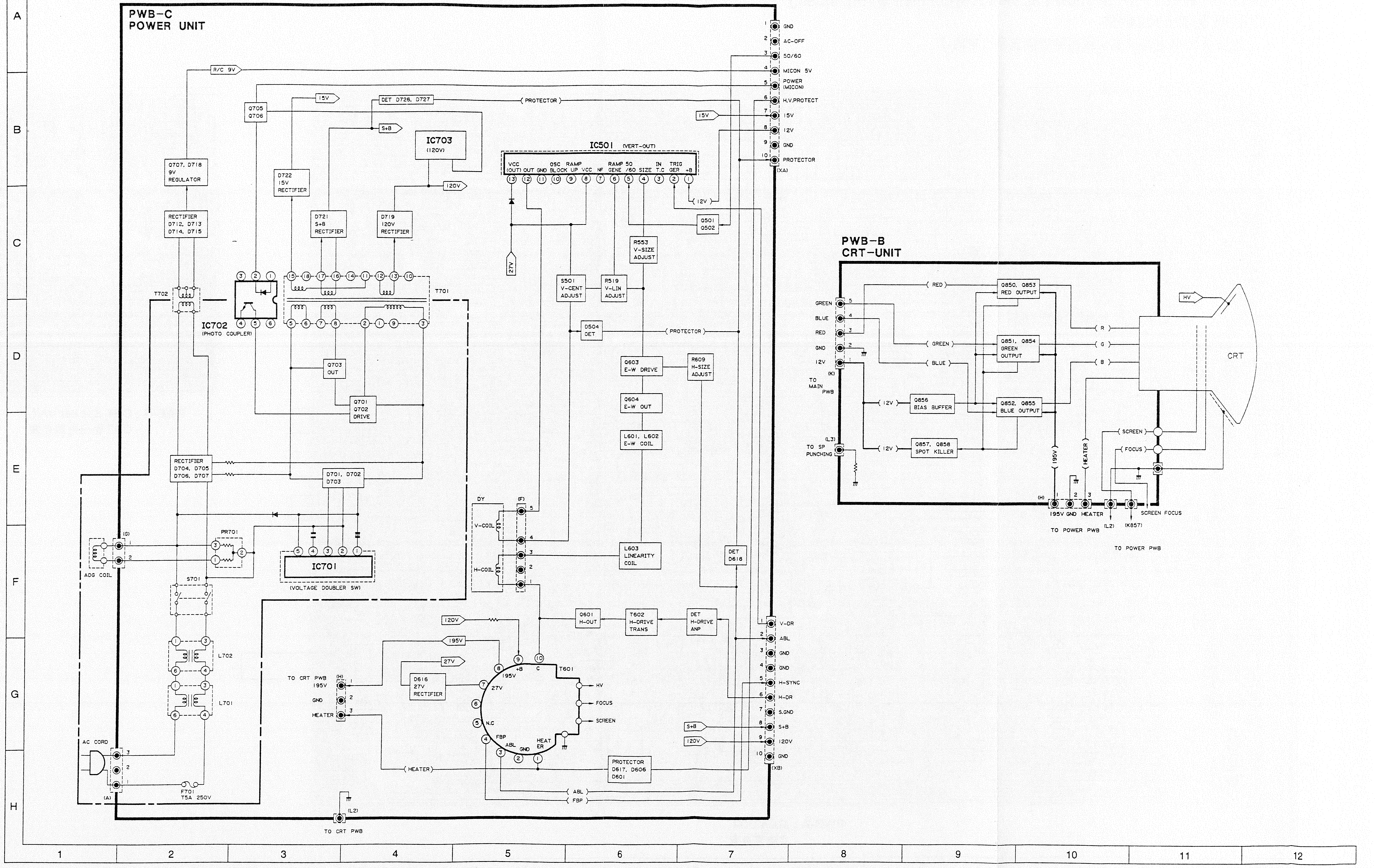
PWB–A
(MAIN–UNIT)

DUNTK9120WEV0 (29KN1) DUNTK9120WEV4 (25KN1)
DUNTK9120WEV1 (29KN1S) DUNTK9120WEV5 (25KN1S)


IC1303 (SPATILAIZER)
IC1302 (SOUND PROCESSOR)
IC1301 (SOUND OUT)
5V REGULATOR IC1606
5V REGULATOR IC1604
12V REGULATOR IC1605
8V REGULATOR IC1601
9V REGULATOR IC1602
DET D1606
DET D1605
DET D1610
DET D1604
Q1606 PROTECTOR
IC1003 (RESET IC)
IC1002 (E2P ROM)
IC1001 (μ-COM)
CF1001 μ-CON CLOK
CH-UP S1001
CH-DOWN S1002
VOL-UP S1003
VOL-DOWN S1004
PRESET S1005
R-IN J301
L-IN (MONO) J302
VIDEO-IN J401
POWER ON/OFF D1003
ON TIMER D1004
REMOTE CONTROL SENSOR UNIT RMC1001
Q1006 LED DRIVE
Q1004 Q1005 LED DRIVE
D1041 SSP MODE DRIVE
Q1007 SSP LEVEL DRIVE
S1006 SET UP SW
Q1008 V-MUTE DRIVE
Q1010 FAST SW DRIVE
BUS EXT CONTROL
IC301 (S-CONVERTOR)
CF304 4.5MHz FILTER
CF303 5.5MHz FILTER
CF302 6.5MHz FILTER
CF401 CF402 5.5/6.0/6.5MHz TRAP
CF403 4.5MHz TRAP
Q405 Q406 VIDZOAMP
Q409 Q411 VIDEO AMP
Q301 BUFFER
CF301 6.0MHz FILTER
Q209 D205 D206 V-MUTE
IC401 (AV SW)
SF201 SAW FILTER
Q204 BAND WIDTLI SW (PAL/NTSC)
Q201 PIF PRE AMP
IC201 33V ZENER IC
TU201 TUNER
D1628 D1630 8V REGULATOR
Q801 Q802 Q803 RGB BUFFER
IC801 (PIF.SIF.VIDEO.CHROMA.DEFLECTION)
Q1601 D1614 D1615 S-MUTE
DET D1305
D1602 D1626 D1624 PULS FORMER
Q1605 BUFFER
T202 VCO COIL
Q401 Q403 BUFFER
IC901 (SECAM)
IC802
Q1454 BUFFER
Q303 Q304 MUTE DRIVE
Q406 BUFFER
J402
AUDIO R-OUT
AUDIO L-OUT
VIDEO OUT
AV-1 R-IN
AV-1 L/MONO IN
AV-1 VIDEO IN
Q1301 S-MUTE DRIVE
R-SP
L-SP
Q1403 Q1404 PRE-DRIVE
Q1401 Q1402 DRIVE
Q1406 Q1407 Q1408 Q1410 Y-PEAKING
Q1451 Q1452 Q1453 VM GAIN CONTROL
CF1401 CF1402 CHROMA TRAP
Q1409 Y-MUTE
(XA)
(XB)
(PU)
AUDIO L
AUDIO R
SSP-MODE
SSP-LEVEL
9V
R-OUT
L-OUT
BUS
5V
8V
12V
15V
R/C 5V
R/C 9V
GND
AC-OFF
50/60
R/C 9V
POWER
H.V.PROTECT
PROTECTOR
MUTE
S-CONVERTOR SW
VM GAIN
50/60 SW
SAW SW
V-PULSE
H-PULSE
AV SW
FAST SW
RGB DATA
KEY IN
V-DR
ABL
H-SYNC
H-DR
S.GND
S+B
120V
IF-IN
AGC
SIF OUT
CVBS
FRONT R
FRONT L
FRONT VIDEO
AUDIO
AUDIO R
AUDIO L
VIDEO OUT
EXT BUS
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
11
12

BLOCK DIAGRAM
整体电路方框图

□ Power and CRT Socket Unit
□ 电源、CRT管座电路装置


PWB–C
POWER UNIT
R/C 9V
15V
DET D726, D727
PROTECTOR
Q705
Q706
S+B
IC703
(120V)
120V
Q707, D718
9V
REGULATOR
D722
15V
RECTIFIER
RECTIFIER
D712, D713
D714, D715
D721
S+B
RECTIFIER
D719
120V
RECTIFIER
T702
IC702
(PHOTO COUPLER)
T701
Q703
OUT
Q701
Q702
DRIVE
RECTIFIER
D704, D705
D706, D707
D701, D702
D703
PR701
ADG COIL
IC701
(VOLTAGE DOUBLER SW)
S701
L702
L701
AC CORD
F701
T5A 250V
TO CRT PWB
(L2)
IC501 (VERT-OUT)
VCC (OUT)
OUT
GND
OSC BLOCK
RAMP UP
VCC
NF
RAMP GENE
50 /60
SIZE
IN T.C
TRIG GER
+B
12V
Q501
Q502
27V
R553
V-SIZE
ADJUST
S501
V-CENT
ADJUST
R519
V-LIN
ADJUST
D504
DET
PROTECTOR
Q603
E-W DRIVE
R609
H-SIZE
ADJUST
Q604
E-W OUT
L601, L602
E-W COIL
DY
(F)
V-COIL
H-COIL
L603
LINEARITY
COIL
DET
D618
120V
195V
27V
D616
27V
RECTIFIER
TO CRT PWB
195V
GND
HEATER
(H)
Q601
H-OUT
T602
H-DRIVE
TRANS
DET
H-DRIVE
AMP
T601
+B
195V
C
27V
N.C
FBP
ABL
GND
HEAT ER
HV
FOCUS
SCREEN
HEATER
PROTECTOR
D617, Q606
D601
ABL
FBP
S+B
120V
GND
AC-OFF
50/60
MICON 5V
POWER (MICON)
H.V.PROTECT
15V
12V
GND
PROTECTOR
(XA)
V-DR
ABL
GND
GND
H-SYNC
H-DR
S.GND
S+B
120V
GND
(XB)
PWB–B
CRT–UNIT
RED
Q850, Q853
RED OUTPUT
GREEN
Q851, Q854
GREEN OUTPUT
BLUE
Q852, Q855
BLUE OUTPUT
12V
Q856
BIAS BUFFER
Q857, Q858
SPOT KILLER
GREEN
BLUE
RED
GND
12V
(K)
TO MAIN PWB
(L3)
TO SP PUNCHING
R
G
B
HV
CRT
SCREEN
FOCUS
195V
HEATER
(H)
195V GND HEATER
TO POWER PWB
(L2)
(K857)
SCREEN FOCUS
TO POWER PWB
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
11
12

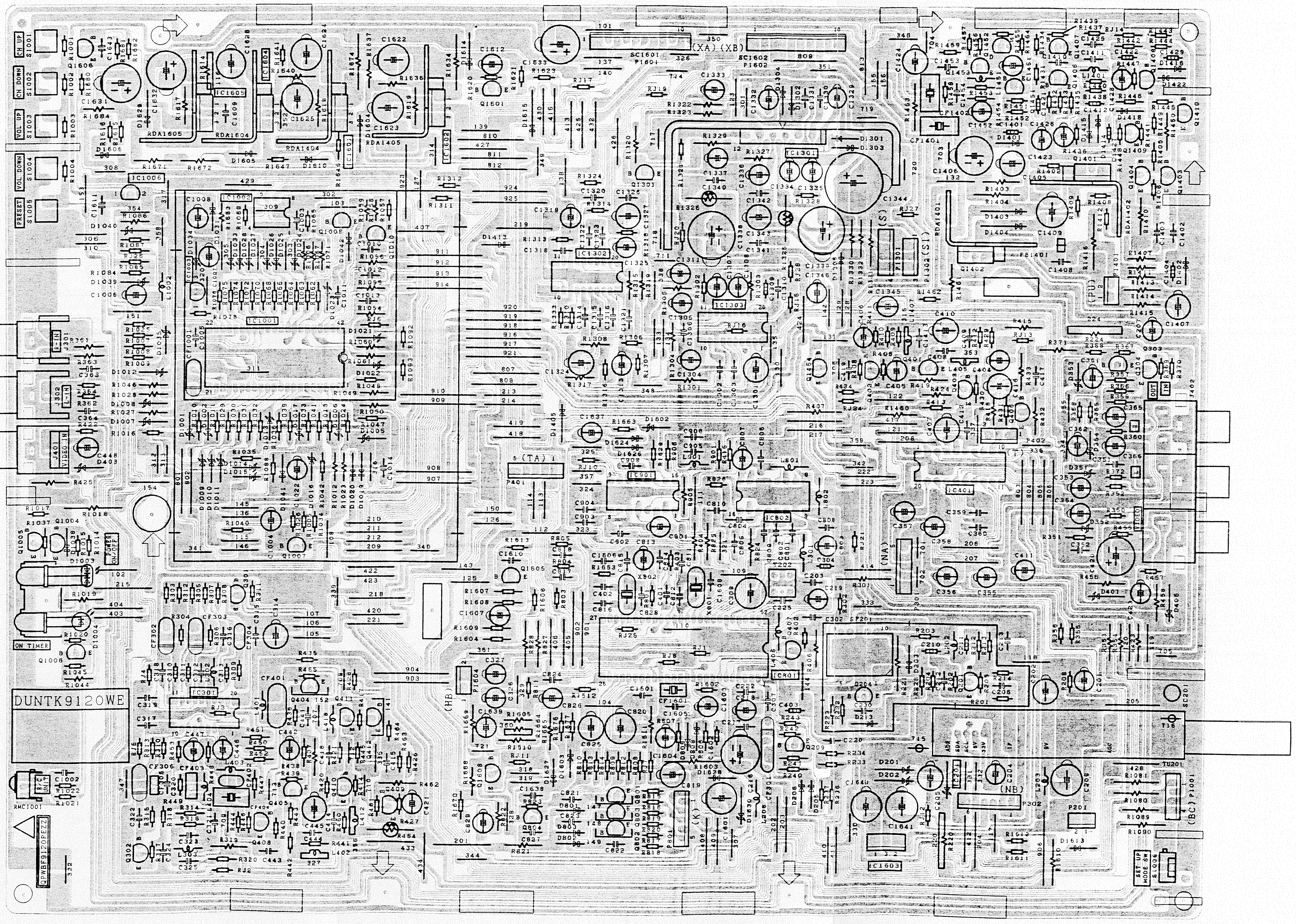
PRINTED WIRING BOARD ASSEMBLIES

(All the PWBs here are shown as viewed from their wiring sides.)

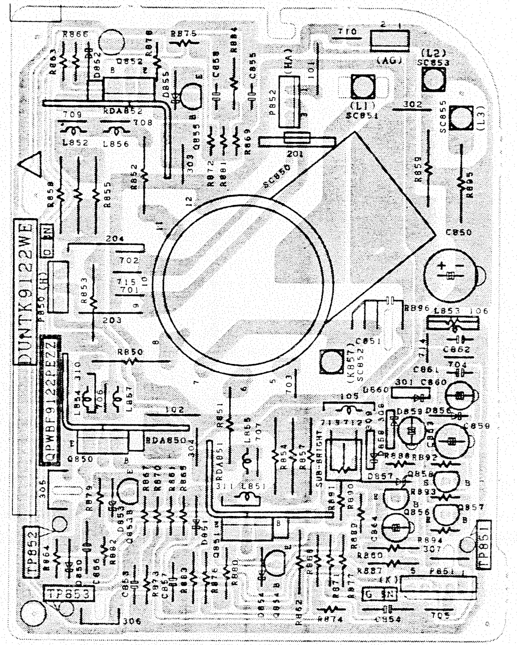
印刷电路板的组装件

(这里所有印刷电路都是从线路贴置侧显示出来的。)

A
B
C
D
E
F
G
H

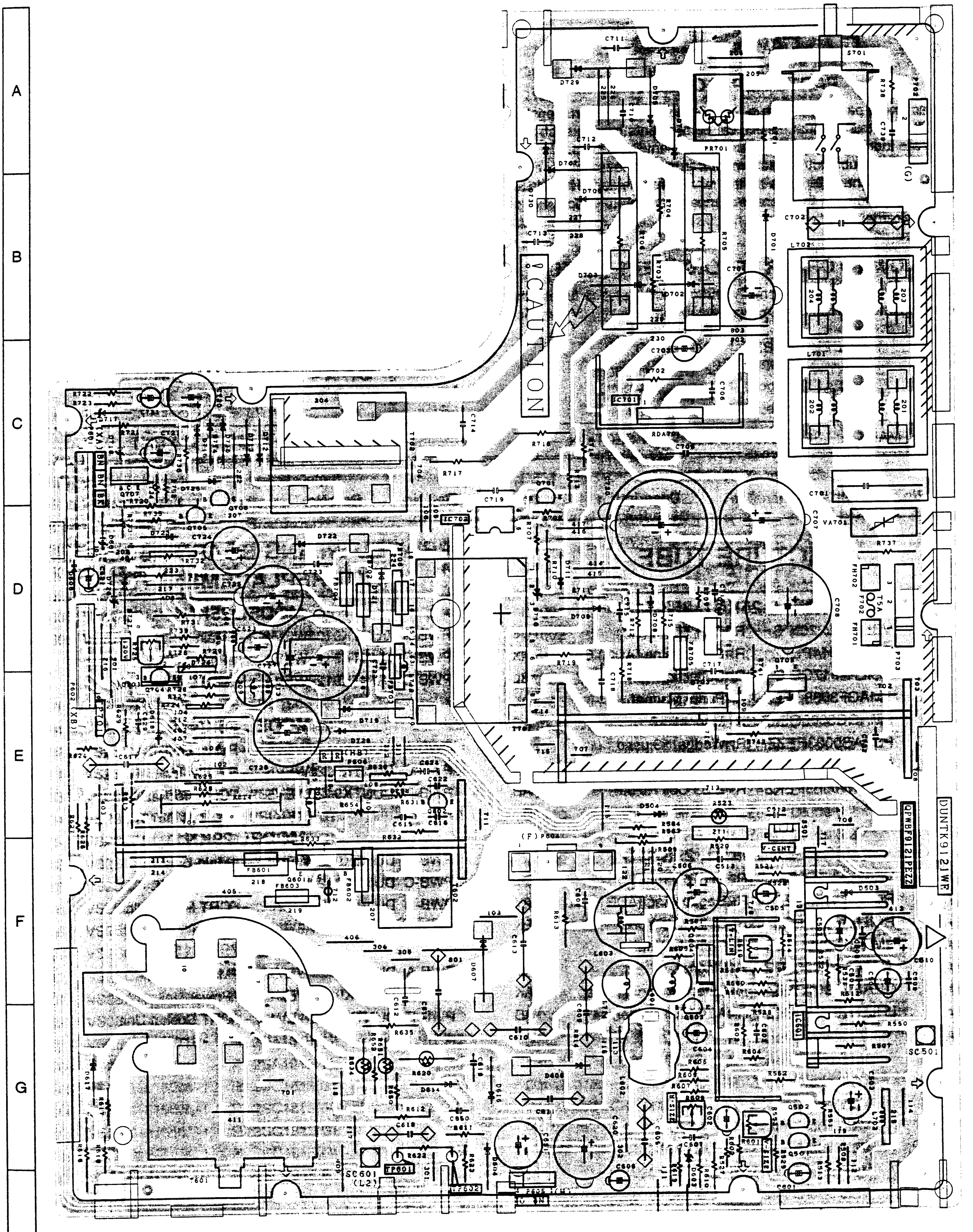

DUNTK9120WE
CH UP
CH DOWN
VOL UP
VOL DOWN
PRESET
ON TIMER
POWER
SET UP MODE SW

PWB-A : Main Unit
主电路装置


DUNTK9122WE

PWB-B : CRT Socket Unit
CRT管座电路装置

1 2 3 4 5 6 7 8 9 10 11 12


A
B
C
D
E
F
G
H
1
2
3
4
5
6
CAUTION
S701
PR701
C711
D729
C712
D707
D706
D730
C713
D703
D702
D701
C702
L702
L701
C705
R702
IC701
RDA
C709
C701
C707
VA701
R737
F702
T5A
F701
P703
C708
IC702
R717
R718
C719
R719
C717
C718
D708
D722
R722
R723
Q707
Q705
Q706
R732
R731
D719
D728
P602
QPWBF9121PE22
DUNTK9121WR
(F) P604
FB601
FB602
FB603
Q601
IC601
D504
D503
R550
SC501
C510
T01
T601
SC601
(L2)
TP601
R635
R620
R622
D606
D607
C610
C612
C613
R613
L602

PWB-C : Power Unit

电源电路装置

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual: electrical components having such features are identified by "⚠" in the Replacement Parts Lists.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

MARK ★: SPARE PARTS-DELIVERY SECTION

更换零件表

更换零件

本维修说明书对具有特别安全要求的零件均用标记加以识别：在此更换零件表中，具有特别安全要求的电路元件均用⚠标记以便注意识别。更换零件时，为了用户的安全以及电视机原有的工作性能，务请使用夏普规定零件。否则，可能有导致触电、火灾或其他不测事故发生的可能。

更换零件的订货方法

为了能迅速而确实地接受订货、以及正确无误地按时交货，在订货时请将下列各项明确告知。

1. 型号
2. 参考编号
3. 零件编号
4. 零件名称
5. 代号
6. 数量

附★记号为备用部件的交货部门

PICTURE TUBE

MODELS 25KN1, 25KN1S

Ref. No.	Part No.	★	Description	Code
⚠	VB59KYL220X*S	R	CRT 59cm (25")	CS
⚠	RCiLG0044PEZZ	R	Degaussing (ADG) Coil	AX
⚠	RCiLH1817CEZZ	R	Deflection Yoke	BL
	PMAGF3038CEZZ	R	Purity Magnet	AL
	PMAGG3002CEZZ	R	Magnet, x2	AC
	PSPAG0003PEZZ	R	Wedge, x3 used	AD
	QEARC2501PEZZ	R	Wire, Grounding Strap	AK
	LHLDW0003PEKZ	R	ADG Coil Holder	AB

MODELS 29KN1, 29KN1S

Ref. No.	Part No.	★	Description	Code
⚠	VB68KVL74X/*S	R	CRT 68cm (29")	CQ
⚠	RCiLG0045PEZZ	R	Degaussing (ADG) Coil	AY
⚠	RCiLH1841CEZZ	R	Deflection Yoke	BK
	PMAGF3038CEZZ	R	Purity Magnet	AL
	PMAGG3002CEZZ	R	Magnet, x2	AC
	QEARC2901PEZZ	R	Wire, Grounding Strap	AK
	LHLDW0003PEKZ	R	ADG Coil Holder, x4	AB

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

MODEL 25KN1

Ref. No.	Part No.	★	Description	Code
PWB-A	DUNTK9120WEV4	–	Main Unit	—
PWB-C	DUNTK9121WEV4	–	Power Unit	—
PWB-B	DUNTK9122WEV4	–	CRT Socket Unit	—

MODEL 25KN1S

Ref. No.	Part No.	★	Description	Code
PWB-A	DUNTK9120WEV5	–	Main Unit	—
PWB-C	DUNTK9121WEV5	–	Power Unit	—
PWB-B	DUNTK9122WEV5	–	CRT Socket Unit	—

MODEL 29KN1

Ref. No.	Part No.	★	Description	Code
PWB-A	DUNTK9120WEV0	–	Main Unit	—
PWB-C	DUNTK9121WEV0	–	Power Unit	—
PWB-B	DUNTK9122WEV0	–	CRT Socket Unit	—

MODEL 29KN1S

Ref. No.	Part No.	★	Description	Code
PWB-A	DUNTK9120WEV1	–	Main Unit	—
PWB-C	DUNTK9121WEV1	–	Power Unit	—
PWB-B	DUNTK9122WEV1	–	CRT Socket Unit	—

PWB-A DUNTK9120WEV4/V5/V0/V1
MAIN UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

Ref. No.	Part No.	★	Description	Code
⚠ TU201	VTUVTSR6HD64/	R	VHF/UHF Tuner	BH

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC201	RH-iX0249CEZZ	R	33V Zener IC	AE
IC301	VHiM52317SP-1	R	Sound Converter	AK
IC401	VHiLA7955//-1	R	A/V Switch	AK
IC801	VHiM52340SP2E	R	PIF/SIF/Video/Chroma/ Deflection	BE
IC802	VHiU3660M-B-1	R	U3660M-B	AR
IC901	VHiM52325AP-1	R	SECAM	AX
IC1001	RH-iX2759CEZZ	R	Microprocessor	BA
IC1002	VHiAT24C04/-1	R	E2PROM	AP
IC1003	VHiPST529C2-1	R	Reset IC	AD
IC1301	VHiTA8216H/-1	R	Sound Output	AN
IC1302	VHiM62420SP-1	R	Sound Processor	AS
IC1303	VHiAN7395K/-1	R	Spatilaizer	AT
IC1601	VHiKA7808Pi-1	R	8V Regulator	AF
IC1602	VHiKA7809Pi-1	R	9V Regulator	AE
IC1604	VHiKA7805Pi-1	R	5V Regulator	AE
IC1605	VHiKA7812Pi-1	R	12V Regulator	AE
IC1606	VHiUPC78L05-4	R	5V Regulator	AD

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q201	VS2SC1906//1E	R	2SC1906	AC
Q204	VS2SC1815GW-1	R	2SC1815(G)	AB
Q209	VS2SC945AP/-1	R	2SC945AP	AB
Q301	VS2SC945AP/-1	R	2SC945AP	AB
Q303	VS2SC1815GW-1	R	2SC1815(G)	AB
Q304	VS2SC1815GW-1	R	2SC1815(G)	AB
Q401	VS2SC1815GW-1	R	2SC1815(G)	AB
Q403	VS2SC1815GW-1	R	2SC1815(G)	AB
Q405	VS2SC945AP/-1	R	2SC945AP	AB
Q406	VS2SC1815GW-1	R	2SC1815(G)	AB
Q408	VS2SC945AP/-1	R	2SC945AP	AB
Q409	VS2SC945AP/-1	R	2SC945AP	AB
Q411	VS2SC945AP/-1	R	2SC945AP	AB
Q801	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q802	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q803	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q1004	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q1005	VS2SC1815GW-1	R	2SC1815(G)	AB
Q1006	VS2SC1815GW-1	R	2SC1815(G)	AB
Q1007	VS2SC1815GW-1	R	2SC1815(G)	AB
Q1010	VS2SC1815GW-1	R	2SC1815(G)	AB
Q1301	VS2SC1815GW-1	R	2SC1815(G)	AB
Q1401	VS2SA968Y//-1	R	2SA968Y	AF
Q1402	VS2SC2238Y/-1	R	2SC2238Y	AF
Q1403	VS2SC1815YW-1	R	2SC1815Y	AC
Q1404	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q1406	VS2SC1815YW-1	R	2SC1815Y	AC
Q1407	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q1408	VS2SC1815YW-1	R	2SC1815Y	AC
Q1409	VS2SC1815YW-1	R	2SC1815Y	AC
Q1410	VS2SC1815YW-1	R	2SC1815Y	AC
Q1451	VS2SC1815YW-1	R	2SC1815Y	AC
Q1452	VS2SK30AG//2E	R	2SK30AG	AD
Q1453	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q1454	VS2SC1815YW-1	R	2SC1815Y	AC
Q1601	VS2SC945AP/-1	R	2SC945AP	AB
Q1605	VS2SA1015Y/1E	R	2SA1015(Y)	AC
Q1606	VS2SA1015Y/1E	R	2SA1015(Y)	AC

DIODES

Ref. No.	Part No.	★	Description	Code
D201	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D202	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D203	VHD1SS152//-1	R	Diode 1SS152	AB
D205	VHD1SS119//1E	R	Diode 1SS119	AA
D206	VHD1SS119//1E	R	Diode 1SS119	AA
D353	RH-EX0320CEZZ	R	Zener Diode 12V	AA
D354	RH-EX0320CEZZ	R	Zener Diode 12V	AA
D401	RH-EX0320CEZZ	R	Zener Diode 12V	AA
D403	RH-EX0320CEZZ	R	Zener Diode 12V	AA
D405	RH-EX0313CEZZ	R	Zener Diode 9.1V	AA
D808	VHD1SS119//1E	R	Diode 1SS119	AA
D809	VHD1SS119//1E	R	Diode 1SS119	AA
D1001	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1002	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1003	RH-PX0003PEZZ	R	LED, Power On/Off	AF
D1004	RH-PX0274CEZZ	R	LED, On-Timer	AC
D1005	RH-EX0315CEZZ	R	Zener Diode	AA
D1006	RH-EX0315CEZZ	R	Zener Diode	AA
D1007	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1008	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1009	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1010	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1011	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1012	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1013	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1014	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1015	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1016	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1017	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1019	VHD1SS119//1E	R	Diode 1SS119	AA
D1020	VHD1SS119//1E	R	Diode 1SS119	AA
D1021	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1022	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1023	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1024	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1025	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1026	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1027	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1028	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1031	VHD1SS119//1E	R	Diode 1SS119	AA
D1033	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1034	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1035	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA

PWB-A DUNTK9120WEV4/V5/V0/V1 MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
D1038	VHD1SS119//1E	R	Diode 1SS119	AA
D1039	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1040	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1041	VHD1SS119//1E	R	Diode 1SS119	AA
D1042	VHD1SS119//1E	R	Diode 1SS119	AA
D1043	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D1301	VHD1SS119//1E	R	Diode 1SS119	AA
D1302	VHD1SS119//1E	R	Diode 1SS119	AA
D1303	VHD1SS119//1E	R	Diode 1SS119	AA
D1304	VHD1SS119//1E	R	Diode 1SS119	AA
D1305	VHD1SS119//1E	R	Diode 1SS119	AA
D1306	VHD1SS119//1E	R	Diode 1SS119	AA
D1401	VHD1SS119//1E	R	Diode 1SS119	AA
D1402	VHD1SS119//1E	R	Diode 1SS119	AA
D1403	RH-DX0086TAZZ	R	Diode	AC
D1404	RH-DX0086TAZZ	R	Diode	AC
D1405	VHD1SS119//1E	R	Diode 1SS119	AA
D1413	VHD1SS119//1E	R	Diode 1SS119	AA
D1414	VHD1SS119//1E	R	Diode 1SS119	AA
D1415	VHD1SS119//1E	R	Diode 1SS119	AA
D1416	VHD1SS119//1E	R	Diode 1SS119	AA
D1418	VHD1SS119//1E	R	Diode 1SS119	AA
D1422	VHD1SS119//1E	R	Diode 1SS119	AA
D1602	RH-EX0310CEZZ	R	Zener Diode	AA
D1603	VHD1SS119//1E	R	Diode 1SS119	AA
D1604	VHD1SS119//1E	R	Diode 1SS119	AA
D1605	VHD1SS119//1E	R	Diode 1SS119	AA
D1606	VHD1SS119//1E	R	Diode 1SS119	AA
D1610	VHD1SS119//1E	R	Diode 1SS119	AA
D1614	VHD1SS119//1E	R	Diode 1SS119	AA
D1615	VHD1SS119//1E	R	Diode 1SS119	AA
D1624	VHD1SS119//1E	R	Diode 1SS119	AA
D1626	VHD1SS119//1E	R	Diode 1SS119	AA
D1627	VHD1SS119//1E	R	Diode 1SS119	AA
D1628	VHD1SS119//1E	R	Diode 1SS119	AA
D1629	VHD1SS119//1E	R	Diode 1SS119	AA
D1630	RH-EX0305CEZZ	R	Zener Diode	AA

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
X801	RCRSB0008PEZZ	R	Crystal 4.43MHz	AH
X802	RCRSB0009PEZZ	R	Crystal 3.58MHz	AL

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
CF301	RFiLC0009PEZZ	R	Ceramic Filter	AF
CF302	RFiLC0010PEZZ	R	Ceramic Filter	AF
CF303	RFiLC0008PEZZ	R	Ceramic Filter	AF
CF304	RFiLC0007PEZZ	R	Ceramic Filter	AF
CF305	RFiLA0072CEZZ	R	Ceramic Filter	AE
CF401	RFiLC0011PEZZ	R	Ceramic Filter	AH
CF402	RFiLC0006PEZZ	R	Ceramic Filter	AF
CF403	RFiLC0004PEZZ	R	Ceramic Filter	AE
CF404	RFiLC0228CEZZ	R	Ceramic Filter	AF
CF1001	RFiLA0084CEZZ	R	Ceramic Filter	AE
CF1401	RFiLC0170CEZZ	R	Ceramic Filter	AD
CF1402	RFiLC0286CEZZ	R	Ceramic Filter	AE
CF1601	RFiLA0078CEZZ	R	Ceramic Filter	AF
L202	VP-XF1R2K0000	R	Peaking Coil 1.2µH	AB
L203	VP-MK101K0000	R	Peaking Coil 100µH	AB
L204	VP-XF120K0000	R	Peaking Coil 12µH	AB
L206	VP-DF120K0000	R	Peaking Coil 12µH	AB
L301	VP-DF101K0000	R	Peaking Coil 100µH	AB
L302	VP-XF120K0000	R	Peaking Coil 12µH	AB
L401	VP-XF6R8K0000	R	Peaking Coil 6.8µH	AB
L403	VP-XF100K0000	R	Peaking Coil 10µH	AB
L404	VP-XF120K0000	R	Peaking Coil 12µH	AB
L801	VP-DF390K0000	R	Peaking Coil 39µH	AB
L802	VP-DF390K0000	R	Peaking Coil 39µH	AB
L901	VP-XF4R7K0000	R	Peaking Coil 4.7µH	AB
L1002	VP-XF1R0K0000	R	Peaking Coil 1µH	AB
L1401	VP-XF390K0000	R	Peaking Coil 39µH	AB
L1451	VP-XF330K0000	R	Peaking Coil 33µH	AB
L1501	VP-XF120K0000	R	Peaking Coil 12µH	AB
SF201	RFiLC0001PEZZ	R	Surface Accoustic Wave Filter	AS
T202	RCiLD0001PEZZ	R	VCO Coil	

CAPACITORS

Ref. No.	Part No.	★	Description			Code
C201	VCEAGA1HW475M	R	4.7	50V	Electrolytic	AB
C202	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C204	VCEAGA1HW106M	R	10	50V	Electrolytic	AC
C205	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C206	VCKYPA1HB102K	R	1000p	50V	Ceramic	AA
C207	VCEAGA1HW106M	R	10	50V	Electrolytic	AC
C209	VCEAGA1CW337M	R	330	16V	Electrolytic	AC
C210	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C211	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C212	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C213	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C216	VCEAGA0JW108M	R	1000	6.3V	Electrolytic	AC
C217	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C218	VCEAGA1HW224M	R	0.22	50V	Electrolytic	AA
C219	VCEAGA1HW474M	R	0.47	50V	Electrolytic	AA
C220	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C222	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C302	VCQYTA1HM103K	R	0.01	50V	Mylar	AB
C304	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C307	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C308	VCEAGA1CW337M	R	330	16V	Electrolytic	AC
C310	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C311	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C312	VCCSPA1HL330J	R	33p	50V	Ceramic	AA
C313	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C314	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C315	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C316	VCCCPA1HH680J	R	68p	50V	Ceramic	AA
C317	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C318	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C319	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C320	VCCCPA1HH180J	R	18p	50V	Ceramic	AA

PWB-A DUNTK9120WEV4/V5/V0/V1
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
C327	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C351	VCKYPA1HB102K	R	1000p	50V	Ceramic	AA
C352	VCKYPA1HB102K	R	1000p	50V	Ceramic	AA
C353	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C354	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C355	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C356	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C357	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C358	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C359	VCKYPA1HB221K	R	220p	50V	Ceramic	AA
C360	VCKYPA1HB221K	R	220p	50V	Ceramic	AA
C361	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C362	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C363	VCCSPA1HL101J	R	100p	50V	Ceramic	AA
C364	VCCSPA1HL101J	R	100p	50V	Ceramic	AA
C365	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C366	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C401	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C402	VCQYTA1HM473K	R	0.047	50V	Mylar	AB
C403	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C404	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C405	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C407	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C408	VCCCPA1HH101J	R	100p	50V	Ceramic	AA
C409	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C410	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C411	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C412	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C416	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C417	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C419	VCCCPA1HH121J	R	120p	50V	Ceramic	AA
C420	VCEAGA1AW477M	R	470	10V	Electrolytic	AC
C421	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C423	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C424	VCCSPA1HL181J	R	180p	50V	Ceramic	AA
C441	VCCCPA1HH560J	R	56p	50V	Ceramic	AA
C442	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C443	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C445	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C446	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C447	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C448	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C801	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C802	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C803	VCEAGA1CW476M	R	47	16V	Electrolytic	AB
C804	VCKYD41HB102K	R	1000p	50V	Ceramic	AA
C805	VCKYPA1HB102K	R	1000p	50V	Ceramic	AA
C806	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C807	VCEAGA1CW476M	R	47	16V	Electrolytic	AB
C808	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C809	VCQYTA1HM223K	R	0.022	50V	Mylar	AB
C810	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C811	VCCCPA1HH120J	R	12p	50V	Ceramic	AA
C812	VCCCPA1HH3R0C	R	3p	50V	Ceramic	AA
C813	VCEAGA1HW105M	R	1	50V	Electrolytic	AC
C814	VCQYTA1HM153K	R	0.015	50V	Mylar	AA
C815	VCCCPA1HH120J	R	12p	50V	Ceramic	AA
C816	VCQYTA1HM473K	R	0.047	50V	Mylar	AB
C817	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C818	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C819	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C820	VCEAGA1CW227M	R	220	16V	Electrolytic	AC
C821	VCCSPA1HL470J	R	47p	50V	Ceramic	AA
C822	VCCSPA1HL470J	R	47p	50V	Ceramic	AA
C823	VCCSPA1HL470J	R	47p	50V	Ceramic	AA
C824	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C825	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C826	VCEAGA1CW226M	R	22	16V	Electrolytic	AB
C828	VCCCPA1HH4R0C	R	4p	50V	Ceramic	AA
C901	VCEAGA1CW476M	R	47	16V	Electrolytic	AB
C902	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C903	VCFYFA1HA474J	R	0.47	50V	M. Polyester	AC
C904	VCFYFA1HA474J	R	0.47	50V	M. Polyester	AC
C905	VCCCPA1HH820J	R	82p	50V	Ceramic	AA
C906	VCCCPA1HH270J	R	27p	50V	Ceramic	AA
C908	VCQYTA1HM104K	R	0.1	50V	Mylar	AC
C1002	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1003	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1004	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C1005	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1006	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C1007	VCEAGA1HW105M	R	1	50V	Electrolytic	AC
C1008	VCEAGA1HW105M	R	1	50V	Electrolytic	AC
C1010	VCCSPA1HL220J	R	22p	50V	Ceramic	AA
C1011	VCCSPA1HL220J	R	22p	50V	Ceramic	AA
C1012	VCCSPA1HL220J	R	22p	50V	Ceramic	AA
C1013	VCCSPA1HL220J	R	22p	50V	Ceramic	AA
C1014	VCKYPA1HB102K	R	1000p	50V	Ceramic	AA
C1022	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C1044	VCEAGA1HW475M	R	4.7	50V	Electrolytic	AB
C1301	VCEAGA1CW107M	R	100	16V	Electrolytic	AB
C1302	VCQYTA1HM393K	R	0.039	50V	Mylar	AB
C1303	VCQYTA1HM563K	R	0.056	50V	Mylar	AB
C1304	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C1305	VCEAGA1CW106M	R	10	16V	Electrolytic	AA
C1306	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1307	VCEAGA1CW226M	R	22	16V	Electrolytic	AB
C1308	VCEAGA1HW105M	R	1	50V	Electrolytic	AC
C1309	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1310	VCQYTA1HM273K	R	0.027	50V	Mylar	AB
C1311	VCEAGA1HW105M	R	1	50V	Electrolytic	AC
C1313	VCEAGA1CW226M	R	22	16V	Electrolytic	AB
C1314	VCQYTA1HM333K	R	0.033	50V	Mylar	AA
C1315	VCFYFA1HA474J	R	0.47	50V	M. Polyester	AC
C1316	VCQYTA1HM223K	R	0.022	50V	Mylar	AB
C1318	VCKYPA1HB102K	R	1000p	50V	Ceramic	AA
C1319	VCEAGA0JW107M	R	100	6.3V	Electrolytic	AB
C1320	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1321	VCQYTA1HM333K	R	0.033	50V	Mylar	AA

PWB-A DUNTK9120WEV4/V5/V0/V1
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
C1322	VCFYFA1HA474J	R	0.47 50V M. Polyester	AC
C1323	VCQYTA1HM223K	R	0.022 50V Mylar	AB
C1324	VCEAGA0JW227M	R	220 6.3V Electrolytic	AB
C1325	VCEAGA1CW226M	R	22 16V Electrolytic	AB
C1326	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1327	VCEAGA1CW107M	R	100 16V Electrolytic	AB
C1329	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C1330	VCQYTA1HM102K	R	1000p 50V Mylar	AA
C1331	VCQYTA1HM102K	R	1000p 50V Mylar	AA
C1332	VCEAGA1HW225M	R	2.2 50V Electrolytic	AB
C1333	VCEAGA1HW225M	R	2.2 50V Electrolytic	AB
C1334	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C1335	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C1336	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C1337	VCEAGA1HW105M	R	1 50V Electrolytic	AC
C1338	VCEAGA1VW108M	R	1000 35V Electrolytic	AD
C1339	VCEAGA1VW108M	R	1000 35V Electrolytic	AD
C1340	VCQYTA1HM104K	R	0.1 50V Mylar	AC
C1341	VCQYTA1HM104K	R	0.1 50V Mylar	AC
C1342	VCQYTA1HM104K	R	0.1 50V Mylar	AC
C1343	VCEAGA1VW476M	R	47 35V Electrolytic	AB
C1344	VCEAGH1VW228M	R	2200 35V Electrolytic	AG
C1345	VCEAGA1CW226M	R	22 16V Electrolytic	AB
C1346	VCEAGA1CW226M	R	22 16V Electrolytic	AB
C1401	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1402	VCKYPA2HB472K	R	4700p 500V Ceramic	AB
C1403	VCKYPA2HB472K	R	4700p 500V Ceramic	AB
C1404	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1405	VCEAGA1CW107M	R	100 16V Electrolytic	AB
C1406	VCEAGA2CW106M	R	10 160V Electrolytic	AC
C1407	VCEAGA1CW107M	R	100 16V Electrolytic	AB
C1408	VCCSPA2HL560K	R	56p 500V Ceramic	AA
C1409	VCEAGA2AW226M	R	22 100V Electrolytic	AC
C1410	VCQYTA1HM152K	R	1500p 50V Mylar	AB
C1411	VCCCPA1HH101J	R	100p 50V Ceramic	AA
C1412	VCKYPA1HB331K	R	330p 50V Ceramic	AA
C1421	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1422	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1423	VCEAGA1CW106M	R	10 16V Electrolytic	AA
C1424	VCEAGA1CW107M	R	100 16V Electrolytic	AB
C1425	VCCSPA1HL680J	R	68p 50V Ceramic	AA
C1426	VCEAGA1CW106M	R	10 16V Electrolytic	AA
C1427	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1428	VCEAGA1CW106M	R	10 16V Electrolytic	AA
C1429	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1451	VCEAGA1CW106M	R	10 16V Electrolytic	AA
C1452	VCEAGA1CW106M	R	10 16V Electrolytic	AA
C1453	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1454	VCCCPA1HH820J	R	82p 50V Ceramic	AA
C1501	VCQYTA1HM183J	R	0.018 50V Mylar	AB
C1601	VCEAGA1CW227M	R	220 16V Electrolytic	AC
C1602	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1603	VCEAGA1CW106M	R	10 16V Electrolytic	AA
C1604	VCEAGA1HW105M	R	1 50V Electrolytic	AC
C1605	VCQYTA1HM103K	R	0.01 50V Mylar	AB
C1606	VCQYTA1HM223K	R	0.022 50V Mylar	AB
C1607	VCEAGA1HW225M	R	2.2 50V Electrolytic	AB
C1608	VCKYPA1HB272K	R	2700p 50V Ceramic	AA
C1610	VCCSPA1HL151J	R	150p 50V Ceramic	AA
C1611	VCQYTA1HM104K	R	0.1 50V Mylar	AC
C1612	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C1622	VCEAGA1CW227M	R	220 16V Electrolytic	AC
C1623	VCEAGA1CW337M	R	330 16V Electrolytic	AC
C1624	VCEAGA1CW337M	R	330 16V Electrolytic	AC
C1625	VCEAGA1CW337M	R	330 16V Electrolytic	AC
C1628	VCEAGA1AW477M	R	470 10V Electrolytic	AC
C1631	VCEAGA1CW477M	R	470 16V Electrolytic	AC
C1632	VCEAGA1EW477M	R	470 25V Electrolytic	AD
C1633	VCEAGA1CW477M	R	470 16V Electrolytic	AC
C1634	VCEAGA1AW227M	R	220 10V Electrolytic	AB
C1637	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C1638	VCFYFA1HA224J	R	0.22 50V M. Polyester	AB
C1643	VCQYTA1HM104K	R	0.1 50V Mylar	AC

RESISTORS

Ref. No.	Part No.	★	Description	Code
R201	VRD-RA2BE151J	R	150 1/8W Carbon	AA
R202	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R203	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R204	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R205	VRD-RA2BE470J	R	47 1/8W Carbon	AA
R208	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R212	VRD-RA2BE182J	R	1.8k 1/8W Carbon	AA
R213	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R214	VRD-RA2BE122J	R	1.2k 1/8W Carbon	AA
R221	VRD-RA2BE1R0J	R	1 1/8W Carbon	AA
R222	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R223	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R224	VRS-VV3DB153J	R	15k 2W Metal Oxide	AA
R228	VRD-RA2BE682J	R	6.8k 1/8W Carbon	AA
R233	VRD-RA2BE224J	R	220k 1/8W Carbon	AA
R234	VRD-RA2BE224J	R	220k 1/8W Carbon	AA
R236	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R237	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R240	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R241	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R242	VRD-RA2BE100J	R	10 1/8W Carbon	AA
R243	VRD-RA2BE392J	R	3.9k 1/8W Carbon	AA
R301	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R302	VRD-RA2BE333J	R	33k 1/8W Carbon	AA
R303	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R305	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R307	VRD-RA2BE271J	R	270 1/8W Carbon	AA
R308	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R309	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R310	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R311	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R312	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R313	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R350	VRD-RA2BE102J	R	1k 1/8W Carbon	AA

PWB-A DUNTK9120WEV4/V5/V0/V1
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R351	VRD-RA2BE564J	R	560k 1/8W Carbon	AA
R352	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R353	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R354	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R355	VRD-RA2BE564J	R	560k 1/8W Carbon	AA
R356	VRD-RA2BE564J	R	560k 1/8W Carbon	AA
R357	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R358	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R359	VRD-RA2BE104J	R	100k 1/8W Carbon	AA
R360	VRD-RA2BE104J	R	100k 1/8W Carbon	AA
R361	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R362	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R363	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R364	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R365	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R366	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R367	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R368	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R369	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R370	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R371	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R372	VRD-RA2BE564J	R	560k 1/8W Carbon	AA
R402	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R403	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R404	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R407	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R412	VRD-RA2BE821J	R	820 1/8W Carbon	AA
R413	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R414	VRD-RA2BE122J	R	1.2k 1/8W Carbon	AA
R415	VRD-RM2HD100J	R	10 1/2W Carbon	AA
R416	VRD-RA2BE100J	R	10 1/8W Carbon	AA
R417	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R418	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R419	VRD-RA2EE471J	R	470 1/4W Carbon	AA
R422	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R423	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R424	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R425	VRD-RA2EE750J	R	75 1/4W Carbon	AA
R426	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R427	VRD-RA2BE562J	R	5.6k 1/8W Carbon	AA
R429	VRD-RA2BE183J	R	18k 1/8W Carbon	AA
R430	VRD-RA2BE682J	R	6.8k 1/8W Carbon	AA
R431	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R432	VRD-RA2EE471J	R	470 1/4W Carbon	AA
R433	VRD-RM2HD100J	R	10 1/2W Carbon	AA
R435	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R436	VRD-RA2BE681J	R	680 1/8W Carbon	AA
R437	VRD-RA2EE391J	R	390 1/4W Carbon	AA
R438	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R439	VRD-RA2BE562J	R	5.6k 1/8W Carbon	AA
R440	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R442	VRD-RA2BE152J	R	1.5k 1/8W Carbon	AA
R443	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R444	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R445	VRD-RA2BE271J	R	270 1/8W Carbon	AA
R446	VRD-RA2BE330J	R	33 1/8W Carbon	AA
R447	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R448	VRD-RA2BE182J	R	1.8k 1/8W Carbon	AA
R449	VRD-RA2BE182J	R	1.8k 1/8W Carbon	AA
R450	VRD-RA2BE563J	R	56k 1/8W Carbon	AA
R451	VRD-RA2BE683J	R	68k 1/8W Carbon	AA
R452	VRD-RA2BE563J	R	56k 1/8W Carbon	AA
R453	VRD-RA2BE683J	R	68k 1/8W Carbon	AA
⚠ R454	RR-XZ0026CEZZ	R	10 1/4W Fuse Resistor	AB
R455	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R456	VRD-RA2EE750J	R	75 1/4W Carbon	AA
R457	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R458	VRD-RA2EE750J	R	75 1/4W Carbon	AA
R461	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R462	VRD-RA2EE391J	R	390 1/4W Carbon	AA
R463	VRD-RA2BE681J	R	680 1/8W Carbon	AA
R466	VRD-RA2BE100J	R	10 1/8W Carbon	AA
R801	VRD-RA2BE332J	R	3.3k 1/8W Carbon	AA
R803	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R804	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R805	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R806	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R807	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R808	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R809	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R810	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R811	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R812	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R813	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R814	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R815	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R816	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R817	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R818	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R819	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R820	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R824	VRD-RA2EE105J	R	1M 1/4W Carbon	AA
R825	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R826	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R827	VRD-RA2EE565J	R	5.6M 1/4W Carbon	AA
R828	VRD-RA2EE335J	R	3.3M 1/4W Carbon	AA
R901	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R905	VRD-RA2BE122J	R	1.2k 1/8W Carbon	AA
R906	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R1001	VRD-RA2BE273J	R	27k 1/8W Carbon	AA
R1002	VRD-RA2BE822J	R	8.2k 1/8W Carbon	AA
R1003	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R1004	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R1005	VRD-RA2BE681J	R	680 1/8W Carbon	AA
R1007	VRD-RA2BE563J	R	56k 1/8W Carbon	AA
R1008	VRD-RA2BE563J	R	56k 1/8W Carbon	AA
R1009	VRD-RA2BE563J	R	56k 1/8W Carbon	AA
R1010	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R1011	VRD-RA2BE223J	R	22k 1/8W Carbon	AA

PWB-A DUNTK9120WEV4/V5/V0/V1
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R1012	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1013	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1014	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1015	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1016	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1017	VRD-RA2BE472J		R 4.7k 1/8W Carbon	AA
R1018	VRD-RA2BE222J		R 2.2k 1/8W Carbon	AA
R1019	VRD-RA2BE391J		R 390 1/8W Carbon	AA
R1020	VRD-RA2BE561J		R 560 1/8W Carbon	AA
R1021	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1022	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1023	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1024	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1025	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1026	VRD-RA2BE273J		R 27k 1/8W Carbon	AA
R1027	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1028	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1029	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1030	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1031	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1032	VRD-RA2BE563J		R 56k 1/8W Carbon	AA
R1033	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1034	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1035	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1036	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1037	VRD-RA2BE561J		R 560 1/8W Carbon	AA
R1039	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1040	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1041	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1042	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1043	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1044	VRD-RA2BE472J		R 4.7k 1/8W Carbon	AA
R1045	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1046	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1047	VRD-RA2BE683J		R 68k 1/8W Carbon	AA
R1048	VRD-RA2BE153J		R 15k 1/8W Carbon	AA
R1049	VRD-RA2BE822J		R 8.2k 1/8W Carbon	AA
R1050	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1054	VRD-RA2BE472J		R 4.7k 1/8W Carbon	AA
R1055	VRD-RA2BE472J		R 4.7k 1/8W Carbon	AA
R1056	VRD-RA2BE472J		R 4.7k 1/8W Carbon	AA
R1057	VRD-RA2BE472J		R 4.7k 1/8W Carbon	AA
R1058	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1059	VRD-RA2BE392J		R 3.9k 1/8W Carbon	AA
R1060	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1061	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1062	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1063	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1064	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1065	VRD-RA2BE392J		R 3.9k 1/8W Carbon	AA
R1066	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1067	VRD-RA2BE682J		R 6.8k 1/8W Carbon	AA
R1068	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1069	VRD-RA2BE392J		R 3.9k 1/8W Carbon	AA
R1070	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1071	VRD-RA2BE682J		R 6.8k 1/8W Carbon	AA
R1076	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1078	VRD-RA2BE333J		R 33k 1/8W Carbon	AA
R1080	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1081	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1085	VRD-RA2BE563J		R 56k 1/8W Carbon	AA
R1087	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1088	VRD-RA2BE562J		R 5.6k 1/8W Carbon	AA
R1089	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1090	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1092	VRD-RA2BE682J		R 6.8k 1/8W Carbon	AA
R1093	VRD-RA2BE682J		R 6.8k 1/8W Carbon	AA
R1301	VRD-RA2EE105J		R 1M 1/4W Carbon	AA
R1302	VRD-RA2BE154J		R 150k 1/8W Carbon	AA
R1303	VRD-RA2BE472J		R 4.7k 1/8W Carbon	AA
R1304	VRD-RA2BE223J		R 22k 1/8W Carbon	AA
R1305	VRD-RA2BE100J		R 10 1/8W Carbon	AA
R1306	VRD-RA2BE152J		R 1.5k 1/8W Carbon	AA
R1307	VRD-RA2BE152J		R 1.5k 1/8W Carbon	AA
R1308	VRD-RA2BE182J		R 1.8k 1/8W Carbon	AA
R1310	VRD-RA2BE471J		R 470 1/8W Carbon	AA
R1311	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1312	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1313	VRD-RA2BE104J		R 100k 1/8W Carbon	AA
R1314	VRD-RA2BE471J		R 470 1/8W Carbon	AA
R1315	VRD-RA2BE182J		R 1.8k 1/8W Carbon	AA
R1316	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1317	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1318	VRD-RA2BE152J		R 1.5k 1/8W Carbon	AA
R1319	VRD-RA2BE152J		R 1.5k 1/8W Carbon	AA
R1320	VRD-RA2BE473J		R 47k 1/8W Carbon	AA
R1321	VRD-RA2BE473J		R 47k 1/8W Carbon	AA
R1322	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
R1324	VRD-RA2BE102J		R 1k 1/8W Carbon	AA
⚠ R1325	VRG-RF2EB2R2J		R 2.2 1/4W Fuse Resistor	AB
⚠ R1326	VRG-RF2EB2R2J		R 2.2 1/4W Fuse Resistor	AB
R1327	VRD-RA2BE683J		R 68k 1/8W Carbon	AA
R1328	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1329	VRD-RA2BE563J		R 56k 1/8W Carbon	AA
R1330	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1331	VRD-RM2HD332J		R 3.3k 1/2W Carbon	AA
R1332	VRD-RA2BE103J		R 10k 1/8W Carbon	AA
R1402	VRD-RA2BE561J		R 560 1/8W Carbon	AA
R1403	VRD-RA2EE560J		R 56 1/4W Carbon	AA
R1404	VRN-VV3AB2R7J		R 2.7 1W Metal Film	AA
R1405	VRD-RA2BE101J		R 100 1/8W Carbon	AA
R1406	VRD-RA2BE100J		R 10 1/8W Carbon	AA
R1407	VRD-RA2BE820J		R 82 1/8W Carbon	AA
R1408	VRD-RA2BE683J		R 68k 1/8W Carbon	AA
R1409	VRD-RA2BE123J		R 12k 1/8W Carbon	AA
R1410	VRD-RM2HD121J		R 120 1/2W Carbon	AA
R1411	VRD-RA2BE820J		R 82 1/8W Carbon	AA
R1412	VRD-RA2BE683J		R 68k 1/8W Carbon	AA
R1413	VRD-RA2BE561J		R 560 1/8W Carbon	AA

PWB-A DUNTK9120WEV4/V5/V0/V1
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R1414	VRD-RA2EE560J	R	56 1/4W Carbon	AA
R1415	VRD-RA2EE2R7J	R	2.7 1/4W Carbon	AA
R1416	VRS-VV3DB221J	R	220 2W Metal Oxide	AA
R1431	VRD-RA2BE153J	R	15k 1/8W Carbon	AA
R1432	VRD-RA2BE153J	R	15k 1/8W Carbon	AA
R1433	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R1434	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1435	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R1436	VRD-RA2BE104J	R	100k 1/8W Carbon	AA
R1437	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R1438	VRD-RA2BE151J	R	150 1/8W Carbon	AA
R1439	VRD-RA2BE681J	R	680 1/8W Carbon	AA
R1440	VRD-RA2BE104J	R	100k 1/8W Carbon	AA
R1441	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R1442	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1443	VRD-RA2BE681J	R	680 1/8W Carbon	AA
R1444	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R1445	VRD-RA2BE153J	R	15k 1/8W Carbon	AA
R1446	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R1447	VRD-RA2BE151J	R	150 1/8W Carbon	AA
R1448	VRD-RA2BE391J	R	390 1/8W Carbon	AA
R1449	VRD-RA2BE393J	R	39k 1/8W Carbon	AA
R1450	VRD-RM2HD471J	R	470 1/2W Carbon	AA
R1451	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R1452	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R1453	VRD-RA2BE392J	R	3.9k 1/8W Carbon	AA
R1454	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R1455	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1456	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R1457	VRD-RA2BE682J	R	6.8k 1/8W Carbon	AA
R1458	VRD-RA2BE822J	R	8.2k 1/8W Carbon	AA
R1459	VRD-RA2BE154J	R	150k 1/8W Carbon	AA
R1460	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1461	VRD-RA2EE471J	R	470 1/4W Carbon	AA
R1462	VRD-RA2BE560J	R	56 1/8W Carbon	AA
R1463	VRD-RA2BE560J	R	56 1/8W Carbon	AA
R1464	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1510	VRD-RA2BE272J	R	2.7k 1/8W Carbon	AA
R1511	VRD-RA2EE334J	R	330k 1/4W Carbon	AA
R1512	VRD-RA2BE272J	R	2.7k 1/8W Carbon	AA
R1602	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R1603	VRD-RA2BE682J	R	6.8k 1/8W Carbon	AA
R1604	VRD-RA2BE274J	R	270k 1/8W Carbon	AA
R1605	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1606	VRD-RA2BE182J	R	1.8k 1/8W Carbon	AA
R1607	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R1608	VRD-RA2BE560J	R	56 1/8W Carbon	AA
R1609	VRD-RA2BE274J	R	270k 1/8W Carbon	AA
R1615	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1616	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1620	VRD-RA2BE563J	R	56k 1/8W Carbon	AA
R1623	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R1624	VRD-RA2EE101J	R	100 1/4W Carbon	AA
R1629	VRD-RA2BE273J	R	27k 1/8W Carbon	AA
R1634	VRS-VV3DB150J	R	15 2W Metal Oxide	AA
R1636	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1637	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1640	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1641	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1646	VRD-RA2BE682J	R	6.8k 1/8W Carbon	AA
R1647	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R1653	VRD-RA2BE684J	R	680k 1/8W Carbon	AA
R1663	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R1665	VRD-RA2EE154J	R	150k 1/4W Carbon	AA
R1671	VRD-RM2HD820J	R	82 1/2W Carbon	AA
R1672	VRD-RM2HD820J	R	82 1/2W Carbon	AA
R1674	VRS-VV3DB150J	R	15 2W Metal Oxide	AA
R1676	VRD-RA2BE274J	R	270k 1/8W Carbon	AA
R1677	VRD-RA2BE683J	R	68k 1/8W Carbon	AA
R1680	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R1681	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R1682	VRD-RA2BE562J	R	5.6k 1/8W Carbon	AA
R1683	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R1684	VRD-RA2BE103J	R	10k 1/8W Carbon	AA

SWITCHES

Ref. No.	Part No.	★	Description	Code
S1001	QSW-K0079GEZZ	R	Channel Up	AB
S1002	QSW-K0079GEZZ	R	Channel Down	AB
S1003	QSW-K0079GEZZ	R	Volume Up	AB
S1004	QSW-K0079GEZZ	R	Volume Down	AB
S1005	QSW-K0079GEZZ	R	Preset	AB
S1006	QSW-B0015CEZZ	R	Set-up Mode	AC

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
CN1601	QCNW-2067PEZZ	R	Connecting Wire	AH
FB1401	RBLN-0020CEZZ	R	Ferrite Bead	AB
⚠ J301	QJAKE0157CEZZ	R	Jack, R-IN	AG
⚠ J302	QJAKE0159CEZZ	R	Jack, L-IN (MONO)	AF
⚠ J401	QJAKE0158CEZZ	R	Jack, VIDEO-IN	AF
⚠ J402	QTANJ0639CEZZ	R	A/V IN/OUT Terminal	AL
P201	QPLGN0254FJZZ	R	Plug 2-pin	AB
P801	QPLGN0561CEZZ	R	Plug 5-pin (K)	AB
P1001	QPLGN0461CEZZ	R	Plug 4-pin (BC)	AB
P1301	QPLGN0461CEZZ	R	Plug 4-pin (S)	AB
P1302	QPLGN0361CEZZ	R	Plug 3-pin (SI)	AB
P1401	QPLGN0261CEZZ	R	Plug 2-pin (PU)	AB
P1601	QPLGN1061CEZZ	R	Plug 10-pin (XA)	AC
SC1602	QSOCZ1020CEZZ	R	Socket 10-pin (XB)	AF
RMC1001	RRMCU0222CEZZ	R	Infrared R/C Receiver	AL
SLD201	PSLDM0184PEFW	R	Shield	AD
SLD1001	PSLDM0186PEFW	R	Shield	AE
	QCNW-2073PEZZ	R	Connecting Wire	AG

PWB-B DUNTK9122WEV4/V5/V0/V1
CRT SOCKET UNIT

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q850	VS2SC4544LB1E	R	2SC4544	AD
Q851	VS2SC4544LB1E	R	2SC4544	AD
Q852	VS2SC4544LB1E	R	2SC4544	AD
Q853	VS2SC1815GW-1	R	2SC1815GW	AB
Q854	VS2SC1815GW-1	R	2SC1815GW	AB
Q855	VS2SC1815GW-1	R	2SC1815GW	AB
Q856	VS2SA1015Y/1E	R	2SA1015Y	AC
Q857	VS2SC1815GW-1	R	2SC1815GW	AB
Q858	VS2SA1015Y/1E	R	2SA1015Y	AC

DIODES

Ref. No.	Part No.	★	Description	Code
D850	VHD1SS119//1E	R	Diode 1SS119	AA
D851	VHD1SS119//1E	R	Diode 1SS119	AA
D852	VHD1SS119//1E	R	Diode 1SS119	AA
D853	VHD1SS119//1E	R	Diode 1SS119	AA
D854	VHD1SS119//1E	R	Diode 1SS119	AA
D855	VHD1SS119//1E	R	Diode 1SS119	AA
D856	VHD1SS119//1E	R	Diode 1SS119	AA
D857	RH-EX0301CEZZ	R	Zener Diode 6.2V	AA
D858	VHD1SS119//1E	R	Diode 1SS119	AA
D859	VHD1SS119//1E	R	Diode 1SS119	AA
D860	VHD1SS119//1E	R	Diode 1SS119	AA

COILS

Ref. No.	Part No.	★	Description	Code
L854	VP-2K470K000K	R	Peaking Coil 47µH	AB
L855	VP-2K470K000K	R	Peaking Coil 47µH	AB
L856	VP-2K470K000K	R	Peaking Coil 47µH	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C850	VCEAGA2EW106M	R	10 250V Electrolytic	AC
⚠C851	RC-KZ0153CEZZ	R	1000p 3kV Ceramic	AB
C853	VCKYD41HB471K	R	470p 50V Ceramic	AA
C854	VCKYPA1HB331K	R	330p 50V Ceramic	AA
C855	VCKYPA1HB561K	R	560p 50V Ceramic	AA
C856	VCKYPA1HB471K	R	470p 50V Ceramic	AA
C857	VCKYD41HB471K	R	470p 50V Ceramic	AA
C858	VCKYPA1HB471K	R	470p 50V Ceramic	AA
C859	VCEAGA1CW107M	R	100 16V Electrolytic	AB
C860	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C861	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C862	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C863	VCEAGA1CW106M	R	10 16V Electrolytic	AA
C864	VCEAGA1CW226M	R	22 16V Electrolytic	AB

RESISTORS

Ref. No.	Part No.	★	Description	Code
R850	VRC-MA2HG102K	R	1k 1/2W Solid	AA
R851	VRC-MA2HG102K	R	1k 1/2W Solid	AA
R852	VRC-MA2HG102K	R	1k 1/2W Solid	AA
R853	VRS-KT3LB822J	R	8.2k 3W Metal Oxide	AC
R854	VRS-VV3DB183J	R	18k 2W Metal Oxide	AA
R855	VRS-VV3DB183J	R	18k 2W Metal Oxide	AA
R857	VRS-VV3DB153J	R	15k 2W Metal Oxide	AA
R858	VRS-VV3DB153J	R	15k 2W Metal Oxide	AA
R859	VRC-MA2HG224K	R	220k 1/2W Solid	AA
R860	VRD-RA2EE151J	R	150 1/4W Carbon	AA
R861	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R862	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R863	VRD-RA2BE221J	R	220 1/8W Carbon	AA
R864	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R865	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R866	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R867	VRD-RA2BE121J	R	120 1/8W Carbon	AA
R868	VRD-RA2BE181J	R	180 1/8W Carbon	AA
R869	VRD-RA2BE121J	R	120 1/8W Carbon	AA
R870	VRD-RA2BE181J	R	180 1/8W Carbon	AA
R871	VRD-RA2BE121J	R	120 1/8W Carbon	AA
R872	VRD-RA2BE181J	R	180 1/8W Carbon	AA
R873	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R874	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R875	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R876	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R877	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R878	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R879	VRD-RA2BE181J	R	180 1/8W Carbon	AA
R880	VRD-RA2BE181J	R	180 1/8W Carbon	AA
R881	VRD-RA2BE181J	R	180 1/8W Carbon	AA
R882	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R883	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R884	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R887	VRD-RM2HD471J	R	470 1/2W Carbon	AA
R888	VRD-RA2BE152J	R	1.5k 1/8W Carbon	AA
R889	VRD-RA2BE821J	R	820 1/8W Carbon	AA
R891	VRD-RA2BE331J	R	330 1/8W Carbon	AA
R892	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R893	VRD-RA2BE100J	R	10 1/8W Carbon	AA
R894	VRD-RA2BE682J	R	6.8k 1/8W Carbon	AA
R895	VRC-MA2HG335J	R	3.3M 1/2W Solid	AC
R896	VRD-RM2HD100J	R	10 1/2W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P850	QPLGN0361CEZZ	R	Plug 3-pin (H)	AB
P851	QPLGN0561CEZZ	R	Plug 5-pin (K)	AB
⚠SC850	QSOCV0919CEZZ	R	CRT Socket	AH
SC851	QTiPM0083CEZZ	R	Tip (L1)	AB
SC852	QTiPM0083CEZZ	R	Tip (K857)	AB
SC853	QTiPM0083CEZZ	R	Tip (L2)	AB
SC855	QTiPM0083CEZZ	R	Tip (L3)	AB
RDA850	PRDAR0083PEFW	R	Hear Sink, for Q850	AD
RDA851	PRDAR0083PEFW	R	Hear Sink, for Q851	AD
RDA852	PRDAR0083PEFW	R	Heat Sink, for Q852	AD

PWB-C DUNTK9121WEV4/V5/V0/V1
POWER UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC501	VHiLA7838//-1	R	LA7838	AK
⚠ IC701	VHiSTR83145-1	R	STR83145	AX
⚠ IC702	RH-FX0024CEZZ	R	PC113L	AG
IC703	VHiSE120N//-1	R	SE120N	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q501	VS2SC3402//-1	R	2SC3402	AB
Q502	VS2SC3402//-1	R	2SC3402	AB
⚠ Q601	VS2SC3886A/1E	R	2SC3886A	AP
Q602	VS2SC3808//-1	R	2SC3808	AH
Q603	VS2SC1815GW-1	R	2SC1815	AB
Q604	VS2SB1015Y/-1	R	2SB1015	AK
⚠ Q701	VS2SA1015Y/1E	R	2SA1015	AC
⚠ Q702	VS2SC3807//-1	R	2SC3807	AF
⚠ Q703	VS2SC4429//-1	R	2SC4429	AT
Q705	VS2SC1815GW-1	R	2SC1815	AB
Q706	VS2SC1815GW-1	R	2SC1815	AB
Q707	VS2SC4382//1E	R	2SC4382	AF

DIODES

Ref. No.	Part No.	★	Description	Code
D501	RH-EX0320CEZZ	R	Zener Diode 12V	AA
D503	RH-DX0279CEZZ	R	Diode	AB
D504	VHD1SS119//1E	R	Diode 1SS119	AA
D601	RH-EX0331CEZZ	R	Zener Diode 16V (25KN1, 25KN1S)	AA
D601	RH-EX0332CEZZ	R	Zener Diode 18V (29KN1, 29KN1S)	AA
D603	RH-EX0336CEZZ	R	Zener Diode	AA
D604	RH-DX0131CEZZ	R	Diode	AC
D606	RH-DX0229CEZZ	R	Diode	AF
D607	RH-DX0255CEZZ	R	Diode	AC
D608	VHD1SS119//1E	R	Diode 1SS119	AA
D614	RH-DX0302CEZZ	R	Diode	AC
D616	RH-DX0127CEZZ	R	Diode	AC
D617	RH-DX0279CEZZ	R	Diode	AB
D618	VHD1SS119//1E	R	Diode 1SS119	AA
⚠ D701	RH-DX0464CEZZ	R	Diode	AE
⚠ D702	RH-DX0464CEZZ	R	Diode	AE
⚠ D703	RH-DX0464CEZZ	R	Diode	AE
⚠ D704	RH-DX0464CEZZ	R	Diode	AE
⚠ D705	RH-DX0464CEZZ	R	Diode	AE
⚠ D706	RH-DX0464CEZZ	R	Diode	AE
⚠ D707	RH-DX0464CEZZ	R	Diode	AE
⚠ D708	VHD1SS119//1E	R	Diode 1SS119	AA
⚠ D709	RH-DX0465CEZZ	R	Diode	AD
⚠ D710	RH-EX0318CEZZ	R	Zener Diode 11V	AA
⚠ D711	VHD1SS119//1E	R	Diode 1SS119	AA
D712	RH-DX0279CEZZ	R	Diode	AB
D713	RH-DX0279CEZZ	R	Diode	AB
D714	RH-DX0279CEZZ	R	Diode	AB
D715	RH-DX0279CEZZ	R	Diode	AB
D716	RH-DX0279CEZZ	R	Diode	AB
D717	RH-EX0322CEZZ	R	Zener Diode 12.1V	AA
D718	RH-EX0316CEZZ	R	Zener Diode 10V	AA
D719	RH-DX0229CEZZ	R	Diode	AF
D721	RH-DX0327CEZZ	R	Diode	AE
D722	RH-DX0327CEZZ	R	Diode	AE
D723	VHD1SS119//1E	R	Diode 1SS119	AA
D725	VHD1SS119//1E	R	Diode 1SS119	AA
D726	RH-EX0316CEZZ	R	Zener Diode 10V	AA
D727	VHD1SS119//1E	R	Diode 1SS119	AA
⚠ VA701	RH-VX0033CEZZ	R	Varistor	AD

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
⚠ PR701	RMPTP0071CEZZ	R	Positive Coefficient Thermistor	AP

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
L601	RCiLZ0010PEZZ	R	Coil	AG
L602	RCiLZ0720CEZZ	R	Coil	AL
L603	RCiLZ0822CEZZ	R	Linearity Coil	AL
L604	VP-CF390K0000	R	Peaking Coil 39µH	AB
⚠ L701	RCiLF0181CEZZ	R	Line Filter	AQ
⚠ L702	RCiLF0181CEZZ	R	Line Filter (25KN1, 29KN1)	AQ
L713	RCiLP0226CEZZ	R	Coil	AD
⚠ T601	RTRNF0104PEZZ	R	Flyback Trans. (FBT)	BH
⚠ T602	RTRNZ0343CEZZ	R	Horiz. Drive Trans.	AG
⚠ T701	RTRNZ0106PEZZ	R	Power Regulator Trans.	AZ
⚠ T702	RTRNP0016PEZZ	R	R/C Power Trans.	AR

CONTROLS

Ref. No.	Part No.	★	Description	Code
R519	RVR-M4620GEZZ	R	1k(B) Vert. Linearity	AB
R553	RVR-M4632GEZZ	R	100k(B) Vert. Size	AB
R609	RVR-M4624GEZZ	R	4.7k(B) Horiz. Size	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C501	VCQYTA1HM103K	R	0.01 50V Mylar	AB
C503	VCEAGA1CW477M	R	470 16V Electrolytic	AC
C504	VCEACA1HC105M	R	1 50V Electrolytic	AC
C505	VCEACA1HC225M	R	2.2 50V Electrolytic	AC
C506	VCEAGA1EW108M	R	1000 25V Electrolytic	AD
C507	VCEAGA1VW107M	R	100 35V Electrolytic	AC
C508	VCCSPA1HL101J	R	100p 50V Ceramic	AA
C509	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C512	VCQYTA1HM104K	R	0.1 50V Mylar	AC
C513	VCQYSG2AA473K	R	0.047 100V Mylar	AC
C601	VCEAGA1HW105M	R	1 50V Electrolytic	AC
C602	VCEAGA1AW227M	R	220 10V Electrolytic	AB
C603	VCFYFA1HA474J	R	0.47 50V M. Polyester (25KN1, 25KN1S)	AC
C603	VCFYFA1HA394J	R	0.39 50V M. Polyester (29KN1, 29KN1S)	AC
C604	VCEAGA1HW105M	R	1 50V Electrolytic	AC
C605	VCFYAB2AA275J	R	2.7 100V M. Polyester	AK
C606	VCEAGA1EW226M	R	22 25V Electrolytic	AA
C607	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C608	VCKYPA2HB561K	R	560p 500V Ceramic	AA

PWB-C DUNTK9121WEV4/V5/V0/V1
POWER UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
C609	VCFPPD2DB334J	R	0.33 200V M. Polypro (25KN1, 25KN1S)	AF
C609	VCFPPD2DB274J	R	0.27 200V M. Polypro (29KN1, 29KN1S)	AE
C610	VCFPPD2DB474J	R	0.47 200V M. Polypro	AE
C611	VCQPSC2JA473K	R	0.047 630V Polypro Film	AB
C613	VCFPPD3CA103H	R	0.01 1.6kV M. Polypro	AE
C614	VCFPPD3CA123H	R	0.012 1.6kV M. Polypro (25KN1, 25KN1S)	AE
C614	VCFPPD3CA103H	R	0.01 1.6kV M. Polypro (29KN1, 29KN1S)	AE
C615	VCQYTA1HM104K	R	0.1 50V Mylar	AC
C616	VCKYPA1HB472K	R	4700p 50V Ceramic	AA
C617	VCFPPD2DB474J	R	0.47 200V M. Polypro	AE
C618	VCFYSB2EB224K	R	0.22 250V M. Polyester	AD
C619	VCKYPA2HB102K	R	1000p 500V Ceramic	AA
C620	VCEAGH1VW228M	R	2200 35V Electrolytic	AG
C621	VCEAGA1HW106M	R	10 50V Electrolytic	AC
C622	VCKYPA1HB102K	R	1000p 50V Ceramic	AA
C623	VCEAGA1EW227M	R	220 25V Electrolytic	AC
C624	VCQYTA1HM273K	R	0.027 50V Mylar	AB
C629	VCKYPA2HB331K	R	330p 500V Ceramic	AA
C650	VCKYPA2HB102K	R	1000p 500V Ceramic	AA
C651	VCEAGA2EW336M	R	33 250V Electrolytic	AD
⚠C701	RC-FZ012SGEZZ	R	0.22 AC250V Special	AE
⚠C702	RC-FZ008SCEZZ	R	0.1 AC250V Special (25KN1, 29KN1)	AE
⚠C703	VCEAGA2AW106M	R	10 100V Electrolytic	AC
⚠C704	VCEAGA2WW475M	R	4.7 450V Electrolytic	AF
⚠C705	VCFYAG2JA473J	R	0.047 630V M. Polyester	AF
⚠C706	VCQYTA1HM473J	R	0.047 50V Mylar	AA
⚠C707	RC-EZ0636CEZZ	R	330 250V Electrolytic	AR
⚠C708	RC-EZ0636CEZZ	R	330 250V Electrolytic	AR
⚠C710	VCKYPB3AB102K	R	1000p 1kV Ceramic	AC
⚠C711	VCKYPB3AB102K	R	1000p 1kV Ceramic	AC
⚠C712	VCKYPB3AB102K	R	1000p 1kV Ceramic	AC
⚠C713	VCKYPB3AB102K	R	1000p 1kV Ceramic	AC
⚠C714	RC-KZ018SCEZZ	R	1000p 4kV Ceramic (25KN1, 29KN1)	AD
⚠C714	RC-KZ016SCEZZ	R	470p 4kV Ceramic (25KN1S, 29KN1S)	AD
⚠C715	VCQYTA1HM104K	R	0.1 50V Mylar	AC
⚠C716	VCQYTA1HM103K	R	0.01 50V Mylar	AB
⚠C717	VCQYTA1HM153K	R	0.015 50V Mylar	AA
⚠C718	RC-KZ0073CEZZ	R	2200p 2kV Ceramic	AD
⚠C719	RC-KZ020SCEZZ	R	2200p 4kV Ceramic (25KN1, 29KN1)	AE
⚠C719	RC-KZ0155CEZZ	R	680p 4kV Ceramic (25KN1S, 29KN1S)	AE
C720	VCEAGA2AW107M	R	100 100V Electrolytic	AD
C721	VCEAGA1CW476M	R	47 16V Electrolytic	AB
C722	RC-KZ0039CEZZ	R	680p 2kV Ceramic	AB
C723	RC-KZ0037CEZZ	R	390p 2kV Ceramic	AB
C724	VCEAGA1EW108M	R	1000 25V Electrolytic	AD
C725	VCEAGH1VW228M	R	2200 35V Electrolytic	AG
C727	RC-EZ0400CEZZ	R	220 200V Electrolytic	AM
C728	VCEAGW2CW227M	R	220 160V Electrolytic	AK
⚠C730	RC-EZ0652CEZZ	R	270 450V Electrolytic	AX
C731	VCEAGA2AW105M	R	1 100V Electrolytic	AB
⚠C732	VCKYPA1HB471K	R	470p 50V Ceramic	AA
C733	VCKYD41HB102K	R	1000p 50V Ceramic	AA
⚠C738	VCFYSB2EB224K	R	0.22 250V M. Polyester	AD

RESISTORS

Ref. No.	Part No.	★	Description	Code
R507	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
⚠R508	RR-XZ0020CEZZ	R	39 1/4W Fuse Resistor	AB
R509	VRS-VV3DB151J	R	150 2W Metal Oxide	AA
R512	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R513	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R514	VRD-RA2BE101J	R	100 1/8W Carbon	AA
R517	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R518	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R519	*See Controls*			
R521	VRD-RM2HD182J	R	1.8k 1/2W Carbon	AA
R522	VRD-RM2HD182J	R	1.8k 1/2W Carbon	AA
⚠R523	RR-XZ0035TAZZ	R	22 1/4W Fuse Resistor	AB
R527	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R528	VRD-RM2HD182J	R	1.8k 1/2W Carbon	AA
R529	VRD-RM2HD1R2J	R	1.2 1/2W Carbon	AA
R531	VRD-RA2BE105J	R	1M 1/8W Carbon	AA
R532	VRD-RA2BE105J	R	1M 1/8W Carbon	AA
R550	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R551	VRD-RA2BE683J	R	68k 1/8W Carbon	AA
R552	VRD-RA2BE103J	R	10k 1/8W Carbon (29KN1, 29KN1S)	AA
R553	*See Controls*			
R560	VRD-RA2BE562J	R	5.6k 1/8W Carbon	AA
R561	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R563	VRD-RA2BE273J	R	27k 1/8W Carbon	AA
R564	VRD-RA2BE393J	R	39k 1/8W Carbon	AA
R601	VRD-RA2BE681J	R	680 1/8W Carbon (25KN1, 25KN1S)	AA
R601	VRD-RA2BE561J	R	560 1/8W Carbon (29KN1, 29KN1S)	AA
R602	VRD-RA2BE561J	R	560 1/8W Carbon	AA
R603	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R604	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R605	VRD-RA2BE681J	R	680 1/8W Carbon	AA
R606	VRD-RA2BE152J	R	1.5k 1/8W Carbon	AA
R607	VRD-RA2BE333J	R	33k 1/8W Carbon	AA
R608	VRD-RA2BE125J	R	1.2M 1/8W Carbon	AA
R609	*See Controls*			
R610	VRD-RA2BE182J	R	1.8k 1/8W Carbon	AA
R611	VRD-RM2HD102J	R	1k 1/2W Carbon	AA
R612	VRN-VV3AB4R7J	R	4.7 1W Metal Film	AA
R613	VRS-VV3DB561J	R	560 2W Metal Oxide	AA
R614	VRW-KQ41C3R3K	R	3.3 15W Cement	AG
R615	VRD-RM2HD102J	R	1k 1/2W Carbon	AA
R616	VRN-KT3LB1R8J	R	1.8 3W Metal Film	AF

PWB-C DUNTK9121WEV4/V5/V0/V1 POWER UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R617	VRD-RA2EE101J	R	100 1/4W Carbon	AA
R618	VRD-RA2EE101J	R	100 1/4W Carbon	AA
R619	VRD-RA2BE824J	R	820k 1/8W Carbon	AA
⚠ R620	RR-XZ0016CEZZ	R	1 1/2W Fuse Resistor	AB
R622	VRS-SU2HB102J	R	1k 1/2W Metal Oxide	AA
R623	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R624	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R625	VRD-RA2EE125J	R	1.2M 1/4W Carbon	AA
R626	VRD-RA2BE274J	R	270k 1/8W Carbon	AA
R627	VRD-RA2BE823J	R	82k 1/8W Carbon	AA
R628	VRD-RA2BE564J	R	560k 1/8W Carbon	AA
R629	VRD-RM2HD472J	R	4.7k 1/2W Carbon	AA
R630	VRD-RA2EE221J	R	220 1/4W Carbon	AA
R631	VRD-RA2EE471J	R	470 1/4W Carbon	AA
R632	VRD-RM2HD820J	R	82 1/2W Carbon	AA
R633	VRD-RM2HD470J	R	47 1/2W Carbon	AA
R650	VRD-RM2HD393J	R	39k 1/2W Carbon	AA
⚠ R651	RR-XZ0029CEZZ	R	3.3 1/2W Fuse Resistor	AB
R652	VRD-RM2HD103J	R	10k 1/2W Carbon	AA
R654	VRS-KT3LB180J	R	18 3W Metal Oxide	AD
⚠ R701	VRN-VV3DB2R2J	R	2.2 2W Metal Film	AB
⚠ R702	VRN-VV3DB4R7J	R	4.7 2W Metal Film	AB
⚠ R703	VRS-VV3DB473J	R	47k 2W Metal Oxide	AB
⚠ R704	VRS-VV3DB473J	R	47k 2W Metal Oxide	AB
⚠ R705	VRW-KV4AC1R8K	R	1.8 10W Cement	AD
⚠ R706	VRW-KV4AC1R8K	R	1.8 10W Cement	AD
⚠ R707	VRD-RA2BE272J	R	2.7k 1/8W Carbon	AA
⚠ R708	VRD-RA2BE562J	R	5.6k 1/8W Carbon	AA
⚠ R709	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
⚠ R710	VRS-VV3AB222J	R	2.2k 1W Metal Oxide	AA
⚠ R711	VRD-RM2HD470J	R	47 1/2W Carbon	AA
⚠ R712	VRS-VV3AB153J	R	15k 1W Metal Oxide	AA
⚠ R713	VRD-RM2HD124J	R	120k 1/2W Carbon	AA
⚠ R714	VRD-RM2HD124J	R	120k 1/2W Carbon	AA
⚠ R715	VRS-VV3AB332J	R	3.3k 1W Metal Oxide	AA
⚠ R716	VRC-UA2HG825K	R	8.2M 1/2W Solid	AA
⚠ R717	VRC-UA2HG825K	R	8.2M 1/2W Solid	AA
⚠ R718	VRS-VV3LB470J	R	47 3W Metal Oxide	AB
⚠ R719	VRN-VV3DB6R8J	R	6.8 2W Metal Film	AB
R720	VRS-KT3LB102J	R	1k 3W Metal Oxide	AC
R721	VRS-VV3DB222J	R	2.2k 2W Metal Oxide	AA
R722	VRD-RM2HD273J	R	27k 1/2W Carbon	AA
R723	VRD-RM2HD473J	R	47k 1/2W Carbon	AA
R728	VRD-RM2HD683J	R	68k 1/2W Carbon	AA
R729	VRD-RA2BE273J	R	27k 1/8W Carbon	AA
R731	VRW-KX3HC4R7K	R	4.7 5W Cement	AE
R732	VRN-VV3ABR47J	R	0.47 1W Metal Film	AA
R733	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R734	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R735	VRD-RA2BE333J	R	33k 1/8W Carbon	AA
R736	VRD-RA2BE152J	R	1.5k 1/8W Carbon	AA
⚠ R737	VRC-UA2HG395K	R	3.9M 1/2W Solid	AA
⚠ R738	VRD-RM2HD391J	R	390 1/2W Carbon	AA

Ref. No.	Part No.	★	Description	Code
R740	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R752	VRD-RA2BE681J	R	680 1/8W Carbon	AA

SWITCH

Ref. No.	Part No.	★	Description	Code
S501	QSW-B0015CEZZ	R	Vertical Center Adj.	AC
⚠ S701	QSW-P0591CEZZ	R	Main's Power	AQ

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠ F701	QFS-C5024CEZZ	R	Fuse T5A 250V	AE
⚠ FH701	QFSHD1017CEZZ	R	Fuse Holder	AC
⚠ FH702	QFSHD1018CEZZ	R	Fuse Holder	AC
FB601	RBLN-0037CEZZ	R	Ferrite Bead	AB
FB602	RBLN-0037CEZZ	R	Ferrite Bead	AB
FB702	RBLN-0037CEZZ	R	Ferrite Bead	AB
FB703	RBLN-0037CEZZ	R	Ferrite Bead	AB
FB704	RBLN-0037CEZZ	R	Ferrite Bead	AB
P601	QPLGN1061CEZZ	R	Plug 10-pin (XA)	AC
P602	QPLGZ1019CEZZ	R	Plug 10-pin (XB)	AG
P604	QPLGN0160FJZZ	R	Plug 5-pin	AD
P605	QPLGN0361CEZZ	R	Plug 3-pin (H)	AB
⚠ P702	QPLGN0207CEZZ	R	Plug 2-pin (G)	AA
⚠ P703	QPLGN0304CEZZ	R	Plug 3-pin (A)	AB
SC601	QTiPM0083CEZZ	R	Tip 1-pin (L2)	AB
RDA501	PRDAR0229PEFW	R	Heat Sink, for IC501	AL
⚠ RDA601	PRDAR0227PEFW	R	Heat Sink, for Q601	AK
⚠ RDA701	PRDAR0225PEFW	R	Heat Sink, for IC701	AE
⚠ RDA702	PRDAR0227PEFW	R	Heat Sink, for Q703	AK
	PRDAR0089PEFW	R	Heat Sink, for Q604	AE
	PZETM0016CEZZ	R	Insulator	AB
	LHLDW1047PEZZ	R	Wire Holder	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠	QACCZ3001PEZZ	R	AC Cord (For China and Africa/Mid-East)	AQ
⚠	QACCB5002PEZZ	R	AC Cord (For Hong Kong)	AX
⚠	QACCZ2001PESA	R	AC Cord (For CIS, Singapore and Mid-East)	AN
	LHLDK0002PEK0	R	AC Cord Holder	AA
	VSP1206PB348A	R	Speaker, x2 used	AV
	QCNW-2048PEZZ	R	Connecting Wire (S) (25KN1, 25KN1S)	AL
	QCNW-2036PEZZ	R	Connecting Wire (S) (29KN1, 29KN1S)	AL
	QCNW-2071PEZZ	R	Connecting Wire (H) (25KN1, 25KN1S)	AK
	QCNW-2034PEZZ	R	Connecting Wire (H) (29KN1, 29KN1S)	AK
	QCNW-2072PEZZ	R	Connecting Wire (K) (25KN1, 25KN1S)	AG
	QCNW-2035PEZZ	R	Connecting Wire (K) (29KN1, 29KN1S)	AG
	QCNW-2087PEZZ	R	Connecting Wire (L3) (25KN1, 25KN1S)	AH
	QCNW-1884PEZZ	R	Connecting Wire (L3) (29KN1, 29KN1S)	AH
	QCNW-2074PEZZ	R	Connecting Wire, Focus/Screen (25KN1, 25KN1S)	AK
	QCNW-1688PEZZ	R	Connecting Wire, Focus/Screen (29KN1, 29KN1S)	AL

PACKING PARTS
(NOT REPLACEMENT ITEM)

MODEL 25KN1

Ref. No.	Part No.	★	Description	Code
	SPAKC6174PEZZ	–	Packing Case (For China)	—
	SPAKC6175PEZZ	–	Packing Case (For CIS)	—
	SPAKC6176PEZZ	–	Packing Case (For Hong Kong)	—
	SPAKP0083PEZZ	–	Wrapping Paper	—
	SPAKX2608PEZZ	–	Buffer Material	—
	SSAKH0011PEZZ	–	Wrapping Paper (For China)	—

MODEL 25KN1S

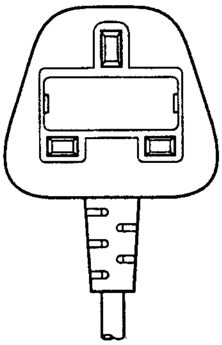
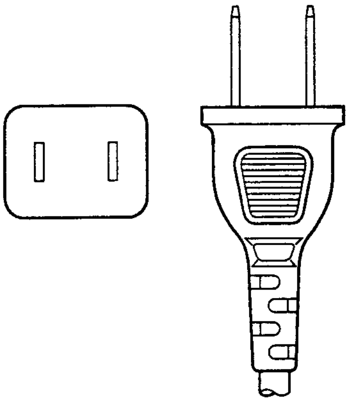
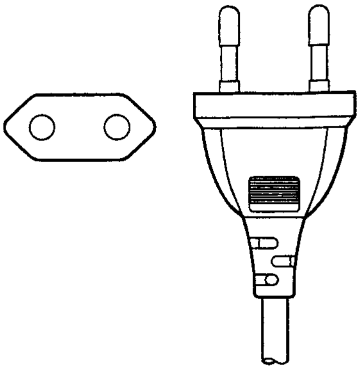
Ref. No.	Part No.	★	Description	Code
	SPAKC6179PEZZ	–	Packing Case	—
	SPAKP0083PEZZ	–	Wrapping Paper	—
	SPAKX2608PEZZ	–	Buffer Material	—

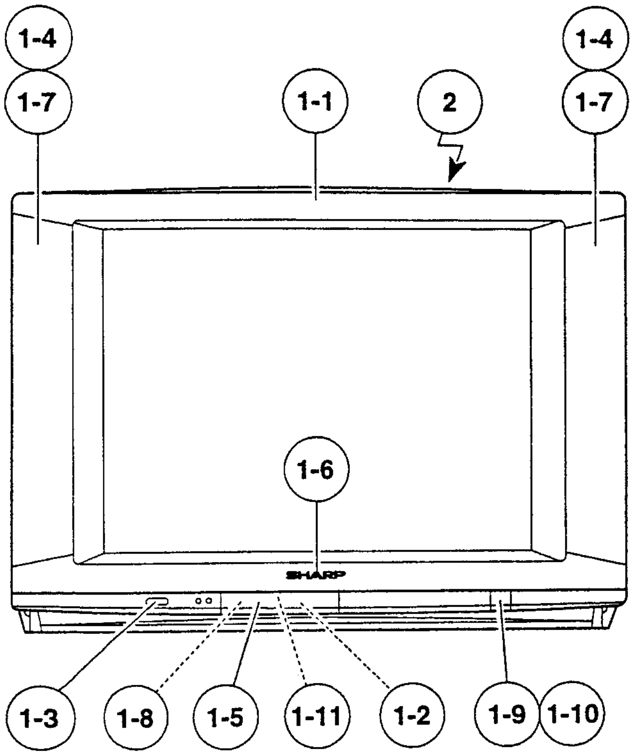
MODEL 29KN1

Ref. No.	Part No.	★	Description	Code
	SPAKC6148PEZZ	–	Packing Case (For Hong Kong)	—
	SPAKC6181PEZZ	–	Packing Case (For China)	—
	SPAKC6182PEZZ	–	Packing Case (For CIS)	—
	SSAKH0018PEZZ	–	Wrapping Paper	—
	SPAKP0093PEZZ	–	Wrapping Paper	—
	SPAKX2609PEZZ	–	Buffer Material	—

MODEL 29KN1S

Ref. No.	Part No.	★	Description	Code
	SPAKC6183PEZZ	–	Packing Case	—
	SPAKP0093PEZZ	–	Wrapping Paper	—
	SPAKX2609PEZZ	–	Buffer Material	—

MODEL	25KN1 29KN1	25KN1 29KN1	25KN1S 29KN1S	25KN1 29KN1	25KN1 29KN1	25KN1S 29KN1S
DESTINATION	HONG KONG	CHINA	AFRICA MID-EAST	SINGAPORE	CIS	MID-EAST
AC CORD	QACCB5002PEZZ 	QACCZ3001PEZZ 		QACCZ2001PESA 		



Ref. No.	Part No.	★	Description	Code

CABINET PARTS

MODELS 25KN1 and 25KN1S

1	CCABA2375WEV0	R	Front Cabinet Ass'y (with Speakers)	BT
1-1	*Not Available*	–	Front Cabinet	—
1-2	GCOVA0068PEZZ	R	Cover, inside the Door	AD
1-3	GCOVA0074PESA	R	Cover, LED/R/C	AF
1-4	*Not Available*	–	Cover, Punching, x2	—
1-5	GDORF0164PESB	R	Door	AH
1-6	HBDGB3120CESA	R	SHARP Badge	AG
1-7	*Not Available*	–	Speaker Punching, x2	—
1-8	HiNDP0217PEZZ	R	Indication Plate, Door	AE
1-9	JBTN-0246PESA	R	Button, Power	AD
1-10	MSPRC0005PEFW	R	Spring, Power Button	AB
1-11	PKAi-0002PE00	R	Door Latch	AG
2	CCABB2289WEV0	R	Rear Cabinet Ass'y	BL

MODELS 29KN1 and 29KN1S

1	CCABA2335WEV0	R	Front Cabinet Ass'y (with Speakers)	BU
1-1	*Not Available*	–	Front Cabinet	—
1-2	GCOVA0068PEZZ	R	Cover, inside the Door	AD
1-3	GCOVA0074PESA	R	Cover, LED/R/C	AF
1-4	*Not Available*	–	Cover, Punching, x2	—
1-5	GDORF0164PESB	R	Door	AH
1-6	HBDGB3120CESA	R	SHARP Badge	AG
1-7	*Not Available*	–	Speaker Punching, x2	—
1-8	HiNDP0217PEZZ	R	Indication Plate, Door	AE
1-9	JBTN-0246PESA	R	Button, Power	AD
1-10	MSPRC0015PEFW	R	Spring, Power Button	AB
1-11	PKAi-0002PE00	R	Door Latch	AG
2	CCABB2269WEV0	R	Rear Cabinet Ass'y	BP

SUPPLIED ACCESSORIES

ACCESSORIES

	QPLGA0011CEZZ	R	AC Plug Adaptor (For China and Africa/Mid-East)	AF
	RRMCG1274PESA	R	Infrared R/C Unit	AW
	TiNS-5961PEZZ	R	Operation Manual	AP

ACCESSORIES (NOT REPLACEMENT ITEM)

	TCADS3004PEZZ	–	SS List (For China)	—
	UBATU0001AJZZ	–	Dry Batteries	—
	TMAPC3967PEZZ	–	Service Map (For Mid-East and Africa/Mid-East)	—